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ABSTRACT

This report is in two parts; the first part deals with a construction of a data base for bibliometric studies. The second part provides a detailed account of the results of those studies. Needs for a data base, the search for a possible candidate, and the decision to build the Check List of Social Sciences Serials (CLOSSS) are explained in the first part of this report. It also discusses the problems met in determining the area of study, defining the terms "serial" and social science, and deciding upon the number and nature of data elements that were to be drawn from the defined population for the purposes of bibliometric study. Planning and administration of data collection, and the organizational and methodological problems met in mounting a large bibliographic data collection are discussed in section 5 of part 1. Section 6 discusses the preparation of data for transfer to magnetic tape. The second part of the report involves a numerical and associative analysis of the file. Lengthy tables are included in the appendices. (Author/AP)

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Design of Information Systems in the Social Sciences

Research Reports
Series B no.4

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Characteristics of Social Science Serials

the construction and analysis of a file of social science serial titles.

by
David Nicholas, Maureen Ritchie
and Robert Bradshaw

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

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IR004268

The Polytechnic of North London
Bath University
1975

PREFACE

The research project Design of Information Systems in the Social Sciences (DISISS) was carried out between 1971 and 1975 with the support of a grant from British Library Research and Development Department (formerly, Office for Scientific and Technical Information). The central team was based at the University of Bath; work was done also at The Polytechnic of North London School of Librarianship, and at the Open University. The results of the research are reported in two series of papers. These reports can be obtained individually on loan from the British Library Lending Division, Boston Spa; a limited number are available for purchase from the Secretary, The Library, Bath University, Claverton Down, BATH BA2 7AY.

This report is concerned with bibliographical and bibliometric studies of serial publications in the social sciences. In particular it deals with the compilation and analysis of the Check List of Social Science Serials (CLOSSS) which was constructed as an essential part of the DISISS project. Further analyses of different aspects of the CLOSSS data are dealt with in DISISS Report A2, which deals also with the size, growth and composition of the monograph literature. This present report is not concerned with citation analyses - these are dealt with in DISISS Reports A3 and B5.

The CLOSSS data was collected by David Nicholas and Maureen Ritchie of The Polytechnic of North London, who also carried out the analyses on the data and wrote this report. Maurice Line, Michael Brittain, Patricia Layzell Ward, Stephen Roberts and Robert Bradshaw have been involved in the work at various stages, including the editing of the report, and Robert Bradshaw wrote section 7. Chris Needham, Adrian Mole, and Peter Burridge also commented on the report, and Marian Biddell typed it.

Thanks are due to all the libraries which made their collections available to us.

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1.0 INTRODUCTION

The recent development of large mechanized serial data bases has, because of the scale of the operation and the considerable costs involved, necessitated a general reappraisal of the bibliographic record and its method of compilation. As part of this appraisal, methods need to be developed by which large quantities of bibliographic data can be gathered both speedily and efficiently; it is therefore necessary to obtain information on the size of the problem (e.g. the potential number of data elements), the difficulties involved in the collection of particular data elements, the costs involved in their collection, and their potential bibliographic or bibliometric value.

This report has been concerned mainly with assembling a body of data which it is hoped, will provide some information on the areas outlined above. Specifically the intention of this report is -

(1) To describe the planning of a large scale data collection exercise - labour resources required, costs, performance, etc.,

(2) To suggest a model for future data collections of a similar kind,

(3) To provide details necessary for a full understanding of CLOSSS (Check List of Social Science Serials).

2.0 SUMMARY

The report is in two parts; the first part deals with the construction of a data base for bibliometric studies and the second part (sections 8 to 15) provides a detailed account of the results of those studies. In the first part, section 3 explains the need for a data base, the search for a possible candidate and the decision to build one from scratch (CLOSSS). Section 4 . discusses the problems met in determining the area of study - defining the terms 'serial' and 'social science', and deciding upon the number and nature of data elements that were to be drawn from the defined population for the purposes of bibliometric study.

Section 5 deals with the planning and administration of the data collection, in particular the design of a data sheet and the specific problems encountered in obtaining information from serials. The organizational and methodological problems met in mounting a large bibliographic data collection are also discussed. Section 6 is concerned with the handling of the data - the preparation of the data for transfer to magnetic tape, and the processing of this data into a suitable form for computer analysis.

The second part is devoted to the analysis of the file. Two forms of analyses are provided, a straightforward numerical analysis and an associative analysis. The first provides information on the occurrence or prevalence of a characteristic; the second examines relationships between a number of variables.

Part 1
Construction of a data base.

3.0 WHY CLOSSS?

DISISS was concerned very much with the nature of the social science literature, since without such knowledge effective control over the literature can hardly be planned. It was also concerned with the way users approach it and see it - e.g. how they group subjects empirically, how they use older literature, how much they use foreign literature, etc. For all these aspects, a far more detailed collection of data was required than any yet carried out. This report is concerned with the collection and analysis of data relating to serials.

DISISS was interested in two aspects of the social science literature - its description and its use as indicated by citation practices. A detailed account of existing serials was not only desirable for itself - at the time little was known about such facts as size, growth and mortality of the literature - but was necessary to the investigation of citation patterns as it prescribed the area of study. In addition the descriptive details assembled contributed considerably to the understanding and interpretation of these citation patterns.

As the descriptive study was concerned mainly with the relative prevalence of some characteristics, variations and association, the most effective way of obtaining such descriptive data was by cross-sectional sampling survey methods. These methods enabled the study to range widely without severe financial or time penalties. Little retrospective information was sought; the project was thus not in a position to provide evidence of causal relationships, nor was it in a position to explain change or growth, its prime function in this respect being to suggest hypotheses for future examination.

Obtaining the descriptive data proved no easy task; in fact it proved to be so difficult that a good deal of the report is devoted to it. The difficulty can be largely attributed to the unfortunate bibliographical state of the subject field. Because of this, the field had to be ordered prior to any analytical work; it was this ordering and organizing that created the problems.

3.1 Search for a data base

To carry out the proposed analyses, it was necessary to have a fairly complete file of data on serials, which could be manipulated easily. The obvious first step was to look around for an acceptable pre-assembled data base, fulfilling the following criteria:

(a) The record of social science serials should be exhaustive, including both live and dead titles,

(b) A full bibliographical description should be provided, including some special features such as coverage by abstracting and indexing services. The information contained should be of value for bibliographical reference and bibliometric description,

(c) The data should be as accurate as possible,

(d) The information should be up-to-date,

(e) The data base should ideally be in a form suitable for computer manipulation.

3.2 Limitations of existing files

Unfortunately no one existing file met these criteria; this was not surprising considering the inadequate control of serials generally, and the particular terminological problems of the social sciences. On the whole, bibliographic control is spread over a variety of more or less unco-ordinated agencies which for various reasons - profit, research, members' needs, etc. - produce a range of widely differing tools, without much concern for the overall problems of duplication and coverage, their incompleteness being often the only common factor. Current continuing bibliography is sometimes left to primary journals, and retrospective bibliography to library catalogues. Even at the most primitive level of bibliographic control - title lists - coverage is by no means complete, even when numerous incomplete lists are combined.

Examination of the available lists of serials threw up only two possible candidates - the UNESCO World List of Social Science Periodicals, 3rd edition, 1966; and Ulrich's International Periodicals Directory, 13th edition, 1969-70, of which only the latter really merited further consideration. Union lists and library catalogues (e.g. New Serial Titles, and BUCOP), while offering the most complete coverage of serial titles, were rejected on the grounds that too little information was given about each title. This was particularly unfortunate as these bibliographies were often the only sources for information on dead serials.

The UNESCO list was considered because it was the only international bibliography devoted entirely to the social sciences, but it was found wanting on several counts. It is extremely selective both in choice of periodicals (only 87 British entries out of a number later estimated at 1,175) and in subject areas (psychology, and many areas of professional study are omitted). It is now also out-of-date, covering journals published only up to 1963[1].

Ulrich met many of our requirements, at least in part. However, three factors ultimately told against it. These were limited coverage of dead material (indirect coverage only as a result of its having been published since 1932), inaccuracy, and incompleteness of records. With neither Ulrich nor the UNESCO list would we have avoided preparing the data for input to a computer.

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[1] Plans to publish a revised edition have been shelved. Some updating for the 3rd edition is available through supplements to the International Social Science Journal.

3.3 The need to compile a new data base

Because of the inadequacies of other potential data sources only two alternatives remained: either to create a data base from a combination of existing sources, or to compile one from scratch. The former, while appealing financially, had to be discounted after a preliminary investigation and confirmed our doubts as to the possibility of reconciling differences in compilation, detail and currency. Thus we were left with constructing the file from scratch, collecting the information from various social science libraries in England. We called the file a Check List of Social Science Serials (CLOSSS) - 'Check List' to avoid any implication that it was a definitive list, whether in total comprehensiveness or in bibliographical detail.

4.0 JOB SPECIFICATION

Before embarking on the data collection exercise several issues had to be resolved. Firstly, it was necessary to isolate, somehow, the set of serials to be 'observed', and secondly to decide what sort of information was necessary for each member of the set. Thus it was important to specify what was meant by 'social science' and by 'serial'. Too narrow a definition might mean the exclusion of some hundreds of items from a file on which many of the project's analyses were to be based. We had also to consider how any serial might be described, how much of this description was absolutely essential, and what was desirable but not essential.

4.1 Subject

Defining the social sciences is a very uncertain procedure, especially at the outer finges of the subject, where the lines of demarcation are vague. This uncertain area, which includes the applied and professional subjects, creates problems for those attempting to study or control the literature. Because of the need to use the serial bibliography as a sampling frame for later studies (particularly clustering of journals according to citations, in order to indicate subject groups), there was a risk that the initial selection could bias the later studies. It was not possible to safeguard totally against this; but it seemed best to be as inclusive as possible in the initial stages.

For the purposes of the investigation it was extremely important to cover the area of social science interest rather than that of 'classic' social science study. In other words, to include what social scientists use, rather than what they write in.

The view was held that many studies, and bibliographies for that matter, were too restrictive in their application of the term 'social science'. Such practices frustrate both social scientists and bibliographers by arbitrarily cutting them off from related subject areas. Given the fluidity and uncertainty of social science boundaries narrow definitions are undesirable and unsuitable.

For these reasons subjects have been included which, although they are not normally thought of as social science, extend into some areas of the social sciences, e.g. philosophy, librarianship, archaeology, architecture and history. It should be stressed that these subjects are only represented in part and any future reference to them refers to only that part or aspect of the subject that is considered social science.

The subject groups were based on guidelines laid down by OECD for an Inventory of information resources in the social sciences. A few subjects were added by DISISS - e.g. librarianship, architecture. The subject headings used are shown in Table 1. We hoped both to avoid irrelevant data and to encourage a consistent policy by the collectors, but rigid application of the headings was not advocated, and the rule was always to be inclusive in any case of doubt.

From the list of subject headings it can be seen that each discipline was broken down into major sub-classes. It was intended that this element of specificity, albeit a limited one, would enable us to investigate more closely the behaviour of small subject groups. This was important because small subject areas are more likely to exhibit signs of movement and change than large subject areas. Unfortunately, the data collectors' judgements as to a serial's subject content could not be made to conform at this level and we were thrown back to the more general subject

TABLE 1

SUBJECT HEADINGS: Guidelines for subject coverage of serial titles on CLOSSS file.

Subject categories	Guidelines for sub-areas to be included
Social and behavioural science	multi-disciplinary.
Anthropology	cultural, economic, political, social and applied anthropology, as well as ethnography and ethnology.
Criminology	criminology, penology.
Economics	econometrics, the history of economic thought, economic development, agricultural economics, industrial organisations, international economics, labour economics, money and banking, public finance.
Education	pedagogy, philosophy of education, methods and technique, curriculum development, educational training.
Environmental planning	town and country planning, ecology.
Ergonomics	the relationship of man and his physical environment.
Futurology	social predictions and forecasting.
Geography	cultural, economic, political and social geography, not physical geography.
History	primarily social and economic history.
Linguistics	general, applied and social linguistics, semantics, semiology.
Management	management techniques, personnel, O & M, systems analysis.
Political science	public administration, public law, international relations and peace research, comparative politics, political theory, the study of policy making, political behaviour.
Psychology	clinical counselling, educational, experimental, personality, social, industrial and applied psychology, and psychiatry.
Social policy and social Administration	social work, social-problem-orientated studies (e.g. poverty), professional training for social workers. Social medicine, leisure.
Sociology	economic, organisational, political, rural and urban sociology, the sociologies of knowledge, law, religion, and medicine. Sociometry and other small group research, mass communications, demography.
Statistics and research methodology	the design of experiments and other forms of data collection, sample surveys, and the use of statistical methods in social science research.

In addition areas of law, architecture, archaeology, librarianship and philosophy were considered sufficiently 'close' to the Social Sciences to merit their inclusion.

descriptors, which were in most cases discipline labels.

4.2 Form of serial

Identification of the scope of the 'form' field was made harder by the imprecise way form descriptors are applied to publications, particularly the use (sometimes synonymous, sometimes not) of the terms serial, periodical and journal.

The extent and range of the form field under investigation was largely, although not wholly (a point we shall pursue a little later), determined by what we thought to be the needs of other parts of DISISS research. Both citation and descriptive studies required as inclusive a field as possible, and a broad definition would give scope for exploring the relationships between various types of documents exhibiting continuity of publication, and would also enable a detailed cataloguing of the characteristics of these publications to be made. As a result the following definition was adopted: serials include all those publications of an indefinite duration appearing in sequence (regularly or not) under a common title, their order being ascertainable from numbers or dates appearing in each issue.

One further point needs to be mentioned. Although data was collected from all categories of serial except newspapers, by far the most came from periodicals (see Appendix 1 for definition). While this was partly due to their greater numbers and easier availability, a conscious decision was made to favour this category of serials because of their value to citation studies.

Having established the overall scope of the data collection we had to decide how finely we were going to differentiate between types of serials, or, in other words, how many different forms of serial we could reasonably hope to recognize and identify. Ideally we wanted to isolate every class of publication having some special feature or function, but this was not possible, as it is difficult to produce mutually exclusive classes. The labels currently in use to describe classes of serial are the result of the application of several principles of division, of which the most common are frequency (e.g. annual), function (e.g. review), content (e.g. abstract journal) and level (e.g. magazine). The only way round the problem would have been to allow an element of synthesis in the categorization, but this was rejected on the grounds that it would be too unwieldly and complex to use in the field.

The adoption of a simpler approach, while easing the burden of the data collector, significantly inconvenienced the analysis:- special categories of material could not be isolated and their effects on the whole class could not be studied. Examination of the roles of both magazines and newsletters suffered as a result. Table 2 lists the types of serial we chose, and definitions of both these and others are provided in Appendix 1.

TABLE 2

SERIAL DESCRIPTORS ADOPTED

Name	Apart from the obvious, the categories include the following:
Abstract journal	
Accessions list	'publications received'.
Bibliography	catalogue, union catalogue.
Book review guide	e.g. British Book News.
Cases and case notes	
Conference proceedings	proceedings, symposium, annual meetings.
Contents list bulletin	
Fixed period report	annual report.
Indexing journal	citation index, general indexes, KWIC and KWOC indexes.
Index to research/theses	
Legal/legislation	parliamentary serials, law reports.
Monograph series	series.
Periodical	journal, magazine, bulletin, newsletter.
Statistical bulletin	regular collections of statistics
Yearbook	almanack, directory, annual.

4.3 The choice of data elements

The information collected had to identify each serial uniquely, and also to provide data for bibliometric studies. It also had to be fairly easy to collect.

In principle, for the bibliometric studies a full and detailed collection of data would have been ideal; but practical considerations dictated several limitations. Information was not collected if -

(a) The data element was peculiar to a small number of serials; its collection would have resulted in much redundant searching, for little information e.g., variations in arrangement within a serial.

(b) The data was difficult to trace or seldom recorded (e.g. size of readership).

(c) The collection was time-consuming and expensive - e.g. number of words.

(d) The collection involved linguistic and intellectual expertise e.g. serials published in unfamiliar languages.

(e) The data requirement was ambiguous, and created difficulties in interpretation.

However all problems could not be solved by eliminating data elements. Some elements, (number of articles, beginning date), known to pose considerable problems in collection had to be recorded because of their importance in bibliometric studies.

Another problem area was the assembly of a group of content descriptors which were both able to account for the characteristics of the whole range of serial types, and which were economical of space. Because we could not forecast exactly what characteristics featured significantly, some went unrecognized and were not included in the bibliometric studies.

From the wide range of possible elements, (see Table 3) twenty-two were chosen, and are listed in Table 4. In addition Table 3 provides a comparison between the CLOSSS and ISDS[1] record. It is interesting to

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[1] International Serials Data System, described in Guidelines for ISDS, UNESCO, 1974.

TABLE 3

DATA ELEMENTS: A COMPARISON BETWEEN CLOSSS AND ISDS FORMATS

POTENTIAL DATA ELEMENTS	CLOSSS	ISDS
Title information		
title	x	x
sub-title	x	
alternative title	x	x
alpha/numeric code (ISSN,CODEN)		x
Associative information		
series title		
related title		x
form of relationship (supplement other language edition)		x
Publishing history		
publication status (current, dead)	x	x
start date	x	
end date	x	
previous title(s)	x	limited to one
relationship to previous title		
successor title(s)	x	limited to one
relationship of successor title		x
Publishing pattern		
pattern (calendar, academic)		
frequency statement		x
issue output	x	
regular/irregular pattern		
'Authorship'		
sponsor	x	
type of sponsor	x	
publisher	x	x
Country of publication	x	x
Serial type	x	limited specification
Content description	x	none
articles	x	
news items/notes	x	
reviews (books, products etc)	x	
citations		
abstracts with articles	x	
conferences/meetings	x	
directory information		
forthcoming events/calendars		
letters		
bibliographic information and services	x	
legal/legislation	x	
form of classification		
index		
illustrations		
advertisements		
special features		
Level or market in mind		
Language of publication		
contents	x	x
breakdown		
abstracts	x	
other editions	x	x
alphabet		x
subjects of contents	x	x (limited)
Size		
number of pages		
number of articles	x	
physical size		
Subscription details		
price	x	
variant pricing systems		
Coverage by secondary services	x	x

TABLE 4

BIBLIOGRAPHIC INFORMATION RECORDED FOR EACH SERIAL

Title information

title
sub-title
alternative title

Bibliographic history

previous title
beginning date
ending date
continuing title

Publication pattern

frequency/issues per annum

'Authorship'

issuing body (i.e. sponsor)
type of issuing body
publisher

Country of publication

Form of publication

type of serial
description of serial

Content analysis and description

nature of contents
abstracts with articles
language of contents
assessment of subject content
number of articles

Subscription details

price
availability

Coverage by indexing and abstracting services note the quite considerable differences between the two, a result of their differing functions. The ISDS record is bascially bibliographic, whereas the CLOSSS one is basically bibliometric; that is to say, the ISDS data elements were chosen chiefly for their bibliographical properties (identification, location), while the elements for CLOSSS were selected on the grounds of their value to the descriptive studies. This underlines the dangers of reliance on bibliographical sources for descriptive studies.

One other point should be noted in connection with this discussion on the number and nature of data elements adopted, and that is the depth of analysis of each element. For bibliometric purposes, if variables are to be isolated and assessed, analysis has necessarily to be deep - much deeper in fact than can be provided by the most analytical bibliography. A comparison of the CLOSSS record with the ISDS record shows that, in accord with its function, CLOSSS is superior in depth of analysis.

4.4 Year

Most of the data was collected in 1971. Because the 1970 issues of the serials might have been absent at the binders, we aimed to look at the volume or volumes published in 1969. If a volume covered 12 months, but was not coterminous with the calender year, the 1968-9 volume was used.

5.0 DATA COLLECTION

Having specified our requirements and modified them where practical considerations made it necessary, we were now in a position to go ahead with locating and collecting the data. Location involved identifying major social science serial collections, and checking holdings to assess their value for collection purposes. Collecting involved designing a form, hiring and training labour, and generally managing the whole operation as economically as possible.

A preliminary estimate of the possible size of the population was around 10,000 serials. The project could afford to aim at this number given a collection speed of about ten sheets an hour. This depended on (a) the 'performance' of the data sheet, (b) physical conditions in the libraries, and (c) a clear and accurate 'brief' for the collector. In the event guidance was limited - no printed holdings lists were available, conditions were often far from comfortable and much information was missing from the serials. Consequently, collection rates seldom approached those required. In addition, the population of serials proved much larger than preliminary estimates had suggested, and could not be covered thoroughly (see DISISS Report A2, section 2.0).

5.1 Data collection sheet

Designing and recording sheet was important because of its far-reaching effects on the responses to each question, and thus on the use that could be made of the data.

(a) Function: to save expense and minimize error the sheet was meant to serve as both a field collection sheet and as a punching document. In practice these aims sometimes conflicted making the work of the punch girls difficult (see section 7.2). It also served as a hard-copy record, for proof-reading and emergencies, and as a store for information which was not put on the computer file.

(b) Physical form: a durable and easily handled form was obviously necessary. A cumbersome record would be a nuisance in the libraries because of the restricted conditions, and would also be awkward at sorting and punching stages. Unfortunately, because of the large amount of information required, a much larger record than we had initially wanted was used. The A4 sheet needed filling in on both sides, and was too flimsy. Clipboards were too clumsy and turning over was a nuisance - quite a lot of sheets were completed on one side only as a result. However we profited from this experience when we came to design a form for the citation collection (see DISISS Report B5).

(c) Layout: we wanted the form to be easily understood, and the arrangement to correspond to the order of the information in the serial. To aid in the former an instruction manual was provided. Various possibilities were specified in certain fields (9, 13, 14) to reduce the amount of writing necessary (and to simplify analyses). Although this is useful in a cut and dried situation, it cannot deal with new or unspecified categories, and there is therefore a danger that the results will not give a complete picture.

It is interesting to reflect on the changes to the data collection sheet, brought about by experience in the field, and note the lessons learned.

(i) It is absolutely essential to 'pilot' the sheet extensively when the population under study is as variable as serials.

(ii) Bibliographical data is not always precise or well defined and does not bear up well under close scrutiny. It is much better not to ask too much of it, at least in that way, the quality and accuracy of the data can be in no doubt.

(iii) The work load in the field should be kept to the bare minimum; the data gatherer should not have to collect information that could more easily be collected locally.

(iv) While the sheet should be as economical as possible, this should never be at the cost of legibility.

(v) A self-coding form is absolutely essential to reduce work and mistakes.

The arrangement of the questions on the sheet affected the speed of collection considerably, but it was impossible to get any one arrangement to correspond with the work flow for all serials as they varied so much; so a compromise was reached.

A small pilot study was run before the main data collection started, this enabled us to improve the arrangement of questions somewhat. The two sheets are shown in Appendix 4. Later on in the project, with the experience of three years of data collecting, we redesigned the sheet totally, placing everything on to one side, and making it more or less self-coding; we should have done this in the first place had we but known. This sheet is also shown in Appendix 4.

5.2 Problems of describing serials

The following section provides a brief discussion of the kinds of descriptive information that can be retrieved from serials, and the problems encountered in so doing. The numbers in brackets refer to the field codes on the data collection sheet. The first field on the record (00) is a 5-digit running number used for identification. It became known as the 'CLOSSS number'.

(a) Title information(1-4)

Recording the title of a document is not as easy as it first appears. Merely identifying the title can be difficult, particularly in the case of monograph series, where slight changes are often made from issue to issue. These may seem meaningless to editorial staff, but to the bibliographer they are quite significant. Another problem is whether to enter a document which possesses both a corporate author and a serial-type statement (e.g. Annual Report of the Association of Glass-Blowers) under the corporate author or under the serial form statement. There is, unfortunately, no standard approach to this in the literature and the decision rests upon the use to which the file is to be put. The direct approach of filing under serial type was adopted for this study, as the title on the title page usually appears in this form.

Many serials have alternative title forms e.g. foreign equivalents, abbreviated titles. Serials are often referred to in the literature, by their alternative titles (as our citation studies have shown), so the information is really necessary to trace the serial.

Previous titles are seldom given in the serial, so had to be sought elsewhere in bibliographies; this was time-consuming, but regarded as essential. We had not bargained for the complexities of the history of many serials however, and this created problems at the editing and coding stages, particularly with serials formed from the merging of several others, and with those that split into several parts. Not only is there a housekeeping problem in tying together the relationships, but also a bibliometric one in establishing whether there are meaningful differences between the various kinds of relationship.

Field 2, called on the sheet 'Title in English' was soon changed in practice to subtitle, as a translation is often provided as an alternative title and ad hoc translations would have been useless for our purposes.

(b) Publication history (5,6) (21,22)

Beginning date is a surprisingly difficult piece of information to find in a serial; it is risky to calculate it from the volume number of the serial itself, nor is it easy to obtain from bibliographies or library catalogues. In bibliographies what is given is often the date of the first issue, regardless of title changes; in library catalogues there may be confusion between the date the library first placed its subscription, and the actual starting date of the serial.

Ending date is no easier; serials do not always state (or even know!) that a certain issue is their last, and again published information is sketchy. Even with serials which all the evidence points to as having ceased publication, the exact date is hard to find. To cover this situation a code to indicate that continued existence was unlikely was used.

Fields 21 (CLOSSS number of immediate previous title or titles if the serial is the result of a merger), and 22 (CLOSSS number of subsequent title or titles if the serial splits) were added during editing and proof-reading and were mainly used to simplify searching and file structure.

(c) Publication pattern (7)

The problem here is that stated frequency of publication and actual number of issues a year are not always the same thing. What is the status of a quarterly that appears 3 times a year? A further complication is that while the frequency statement is boldly displayed (often as part of the title statement), the issue statement may be hard to locate. Combinations of issues are not consistent either; the same serial may combine 2 one year and 4 the following year, all the time calling itself a quarterly. Bishop (1965)[1] has identified 26 different publication patterns; this seems to be an understatement. A final difficulty is to define an irregular publication - we settled for intentional irregularity, and ignored accidental irregularity.

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[1] BISHOP, D. Publication patterns of scientific serials. American Documentation, 1965, 16, 113-121.

(d) Authorship details (8-10)

A distinction was made between sponsor or issuing body (used synonomously) and publisher, and where possible both items were collected. Sponsorship details are particularly valuable to the descriptive studies, as it is the sponsor who is ultimately responsible for the information content of the serial. Field 9 is a coded field for type of sponsor. We did not have room to list all possible types- in any case some did not fit neatly into any one category. In the pilot study an element of synthesis was provided, but this was too difficult to apply and had to be altered in the main collection.

Predetermining the breakdown of the field can result in an inaccurate presentation of the data, and it is also difficult to know whether all the fruitful classes have been identified.

Table 5 demonstrates the possible range of classes and shows the ones adopted for the various data collections. In cases where there was no separate sponsor, the publisher was regarded as the sponsor for purposes of Field 9.

(e) Country of publication (11)

Here provision had to be made both for the increasingly popular practice of publishing simultaneously in several countries, and for the habit of some conference proceedings of being published each year in a different country.

(f) Type of serial (12) (13)

In Field 12 the term 'serial' should be substituted for the word 'periodical' on the sheet, and 'irregular serial' for 'monograph series'. This was necessary because in many respects, monograph series have more in common with monographs than with other serials. Because of this

TABLE 5

ISSUING BODIES : a classification of the various types.

	Type	Categories selected for pilot study (an element of synthesis was allowed in the pilot study)	Categories selected for main study
1.	Association	Learned society or professional body (could be combined with 3 and 12)	Association(s) society professional body (membership institutions)
2.	Commercial/business enterprise (excluding commercial publishers)	Private body or firm	Commercial/business enterprise
3.	Educational institution (universities, colleges, schools)	same (could be combined with 1 and 12)	same
4.	Foundation	other	other
5.	Government body (national, local)	same	same
6.	International organisation	same	same
7.	Library	other	other
8.	Nationalised industry	Government body	Government body
9.	Political/pressure group	other	Political/pressure group
10.	Private/individual	Private body or firm	Private/individual
11.	Professional body	Learned society or professional body	Association(s), society, professional body (membership institutions)
12.	Publisher (commercial)	Commercial (could be combined with 1 and 3)	Publisher
13.	Research organisation	other	other
14.	Society	Learned society or professional body	Association(s), society professional body (membership institutions)
15.	State monopoly	State monopoly	Government

we wished to isolate them. The various types of serial categorization covered in Field 13 are discussed above in section 4.3 and illustrated in Table 2, page 9.

(g) Content analysis (14)

Our first list for this field was much more comprehensive, but had to be contracted to save time and space (see Table 6). Bearing in mind the range of serial types and their equally varied contents, the selective list was bound to prove unsatisfactory for some serials. In retrospect we were probably too restrictive, and could have used a fuller list. To obtain a true indication of the contents of a serial several issues have to be scanned, as features differ regularly from one issue to another. Precise description involves the data collector in making rather fine distinctions, e.g. between general articles, news articles, review articles, and it is difficult to be wholly consistent over a wide area.

TABLE 6

POSSIBLE CONTENT DESCRIPTORS

* Articles
* Review articles
  Editorial articles or comment
* News items/notes -
    economic
    political
    technical
    commercial
    industrial
    professional
    educational
    meetings and conferences
* Conference proceedings
  Directory information
  Forthcoming events/calendars
  Illustrations
  Advertisements
* Case notes

* Legislation
  Letters
* Abstracts with articles
  Citations (references)
  Bibliographic information services -
    * bibliographies
    * abstracts
    * index
    * contents list
    * accessions lists
  Reviews -
    * books
      other media
* Statistics
  Index
  Form of classification
  Number of pages
* Number of articles

* Specified on data collection sheet

(h) Abstracts with articles (15)

The position of abstracts within journals is very variable - at the beginning or end of the article, on the contents page (which itself may be on the front or back covers, or inside), or separate from the article grouped with abstracts of other articles. There is also a problem of recognition and terminology. Even in English journals they are variously called abstract, synopsis, summary, resumé and precis; let alone in the foreign journals, where the total variety of terms is much greater.

(i) Language (16)

Distinctions between language(s) of articles of abstracts and of editions were necessary. The language was sometimes difficult to determine because:

(a) It is not always obvious from scanning
(b) It varies from issue to issue
(c) Editorial statements about the language are sometimes misleading.

It would have been interesting to note frequency of use of different languages within a serial, but the idea had to be dropped because of the amount of work involved.

(j) Subject (17)

Assigning subject descriptors to serials took a long time. Subject scope could be determined only by detailed scanning, and it was the field on the form demanding most knowledge. Where this was lacking, a broad classification was made, and the collector wrote a brief description of the subjects of the articles. Obviously foreign language material was particularly difficult, not only because of the language but also because of differing conceptions of subject in different areas (for example, philosophy in Eastern Europe tends to include what would in Britain be called political science or political theory). Table 1 (page 7) gives a list of subject headings used.

(k) Size of serial - number of articles (18)

The aim of collecting this information was to gauge the output of serials, collectively and individually as an aid in assessing the overall size of a literature. It seemed that articles would be the easiest measure, but it was not always easy in fact to decide what was an article. (More work was done on this problem later on in the project and is described in DISISS Report A2, section 4.0.) The exercise was laborious, particularly where no unified contents list was available. Counts were also frustrated by missing issues.

(l) Subscription details (19)

The difficulties here are in codifying the wide range of subscription practices. Subscription rates often vary according to size of library, membership, geographical location, professional status. Also, surprisingly enough, it can be quite hard to find a subscription statement in serials, particularly in types other than journals. Prices were noted in local currency unless a sterling equivalent was provided by the serial, and converted to sterling during editing. Because of fluctuations in currency exchange rates, to say nothing of inflation, these figures give only a very rough indication of cost.

(m) Coverage by indexing and abstracting services (20)

This information would have been invaluable if it had been provided in larger quantities. Unfortunately, few serials, with the notable exception of some published in the USA, list the secondary services in which they are indexed.

5.3 Serial resources of libraries

As CLOSSS was to be compiled from information obtained from the identification and inspection of serials, all the likely sources for this information had to be located. If one library had provided the full range of material, administration would have been eased and efficiency increased - simultaneous use of several libraries results in varying measures of duplication. Unfortunately no one source provided sufficient coverage because the social science serial resources of this country are scattered throughout a large number of society and college libraries. The two most obvious candidates, the British Library Lending Division (BLLD) and the British Library of Political and Economic Science (BLPES), proved wanting in important areas. The BLPES collection, while strong on older material, does not really cover all the social sciences - both psychology and management are poorly represented. The BLLD collection was adequate in subject coverage but weaker for 'dead' and 'local' material. Its relative inaccessibility also prevented greater use being made of its resources.

We therefore had to collect data both from these two major sources and from numerous small specialist libraries. Although more complicated to organise, this procedure would not have been so bad if all the libraries had produced lists of holdings. Few had however, and this meant we had no way of preventing duplication, and were simply adding to the editing tasks. Ideally a list of possible libraries would have been drawn up and each student would have been given a brief listing of titles she was to inspect. As it was, the best that could be done was to collect from collections on the assumption that they did not overlap greatly. This was not a very satisfactory solution; little control could be exercised over what was collected and more responsibility was thrown on the students, extending their work load and reducing productivity.

After consulting directories, librarians and a few lists that did exist of holdings, a list of libraries was established. The use made of each library depended not only on the size of its resources (though obviously this was an important factor) but also on the organisation of the collection and its physical condition. Serials tend to be stored rather than displayed, making them more difficult to consult, particularly in adverse storage conditions. Collections are often scattered in cramped and dirty areas, and only exceptionally are consultation areas provided. The arrangement also makes difficulties as sequences may be broken up according to size, age, type or country of origin of serial, and few collections are classified. To add to all this, serials may be missing because of theft, lending or binding. The effect of all these factors can be considerable, so, when at all possible, the sources used were those offering good working conditions. This applied to many of the smaller society libraries, and of the larger libraries, Senate House and the British Library Lending Division were pleasant to work in.

We would like to record our thanks for the generous access libraries gave us to their collections, without which the work would not have been possible. We particularly appreciate the unlimited use we made of the invaluable material in the stacks at the British Library of Political and Economic Science at the London School of Economics.

Appendix 2 gives details of the resources of the libraries involved, and Table 8 on page 29 shows the use made of each library during the Easter 1971 data collection.

5.4 Data collectors

Because of the size of the operation, the time consuming nature of the investigation and the scattered location of the sources we needed a lot of help and the Polytechnic of North London School of Librarianship proved a valuable reservoir of labour. The use of student labour had particular advantages and it is probably fair to say that such a large scale data gathering exercise could hardly have succeeded without their help. The most important of these advantages were:

(a) Student labour was plentiful and relatively cheap.

(b) Students could be recruited fairly easily (announcements, meetings and contacts could be made simply and quickly).

(c) An administration existed to handle payment and insurance contributions.

(d) Library school students had, or could quickly be given, the knowledge to handle the data.

(e) Motivation could be guaranteed - the work was relevant to their studies so that the work had an added attraction outside its financial reward.

The only disadvantage in using students was that collection opportunities were normally limited to vacations. Luckily we had enough workers to acquire the bulk of the information within these time limits. Short, intensive collections did however tax the administrative and supervisory facilities. The deluge of data resulting from the work of nearly thirty students also made quality and duplication control difficult.

(a) Recruiting and training

The project's labour requirements were quite large - 26 were required for the first exercise and 10 for the second, but doubts as to the possibility of such recruitment were soon dispelled. Because of the difficulties posed intellectually by the subject and language characteristics of the data, students were recruited on their ability to handle certain specified subjects and languages. It was hoped that each collector would be familiar with both the subject and language of the material dealt with. This was realised fully for subject but only partly for language, linguistic expertise being much thinner on the ground, and we had to use our linguistic resources carefully to ensure the maximum benefit.

It was essential that the students understood clearly what was being asked of them before they embarked upon the exercise, since supervision and guidance in the field would be necessarily minimal. Therefore, each student had to be given the training to enable her to work independently. To this end, 4 half-hour seminars were held. The seminars combined instruction with discussion and much time was devoted to problem-solving exercises. Obviously, it was not possible to foresee all the difficulties, not was it possible for the students to retain all the information provided in seminars.

To overcome these particular shortcomings and others besides, a field manual was produced. In general, the manual had to cover every foreseeable eventuality. In particular, however, it provided:

(a) Guidance as to the tracing of documents and the location of information within them (a work flow diagram was provided).
(b) Explanations of terms likely to be encountered.
(c) Exact requirements of each stage of the investigation.
(d) Directory-type information (addresses and opening times of libraries).

The manual proved to be a useful tool in many respects - it went a long way towards standardizing response, saved considerable supervisory effort and provided the students with the knowledge they required to answer many of the questions.

(b) Supervision and administration

The size of the project and the shortage of supervisory staff meant that administration and supervision had to be kept to a minimum. Students were made responsible for the collection and return of data sheets and their own timetabling. The manual would answer most of the queries arising from the data collection, the rest it was hoped, could be dealt with on the telephone. However, as the project progressed and the queries came flooding in, it became increasingly obvious that a large amount of supervisory effort would have to be expended. The difficulties encountered by the students stemmed almost entirely from (a) devising a work flow pattern, and (b) ambiguities and uncertainties arising from the application of the data sheet. Difficulties arose because of the different practices of housing and arranging serials and the general inaccessability of part or all of the serial collection. Of course, these problems would not have been so great had library holdings lists been available as it would have then been possible to give prior guidance. The second problem arose from the impossibility of predicting every case of possible difficulty. Some problems were however overcome in the second collection by the adoption of a simpler data sheet, with more explicit questions and requirements.

To cope with these problems, one of the two members of the team stayed beside the telephone and the other travelled round the libraries. Although the number of possible visits was restricted by geography and time (a single 'tour' took about 3 days), they were essential to assess progress, prevent catastrophic mistakes and make students feel less isolated.

5.5 Fieldwork programme

Basically, four major data collections were mounted over a period of three years. Several smaller supplementary and up-dating collections were also held over this period. Table 7 provides a brief statistical summary of each exercise.

TABLE 7

SUMMARY OF DATA COLLECTION EXERCISES

dates and duration	number of workers involved	libraries involved*	number of titles collected	av time taken to complete a data sheet	unit costs	total cost
March 1971 1 week	26	AA; DEd; DEm; DEn; IE; LSE; LP; NIESR; RIIA; RTPA; RGS; RSS; SH; SS; TI; (15)	3150	14min	12p	£406
July 1971 3 weeks	3	LSE (1)	1600	12min	9½p	£151
Sept. 1971 2 weeks	2	BLL (1)	1100	7-8min	6-7p	£66
Sept. 1973 1 week	1	BLL, LSE, SH IALS	900	6-7min	-	-

*abbreviations refer to libraries listed in Appendix 2

Exercise 1 April, 1971

This exercise was held during the Easter vacation and lasted for nearly a week. Fourteen London social science libraries were involved; twenty-six students in all were assigned to work at these libraries. In addition to being a major data collection, laying the foundations for the following exercises, the exercise was also to be a pilot test for both the data sheet and the organisation of labour. The advantage of such an arrangement, apart from that of economy, was that only in this way could a truly effective pilot (in terms of size) be conducted within the economic constraints of the project. The risks of such an arrangement were considerable. If things went seriously awry and considerable change was required, a large part of our data would be invalidated. Fortunately, although changes were made that necessitated extra work (the data sheet was rearranged to fit in with the work flow) they did not prove too serious.

3,150 records were collected with about 6% duplication, and a further 4% of the records collected turned out to be outside the subject scope. Both these figures are surprisingly low considering the size of the work force, the flexibility of the instructions and the degree to which we were working in the dark. A much more serious figure however was the 50% of sheets returned incomplete. This was almost entirely due to the lack of beginning date and/or subscription price. This meant that the burden of collecting some of the information was transferred to the editors. In the case of the smaller libraries covered, between 80% and 100% of their stock was recorded but in the cases of the larger libraries the range lay between 40% and 60%. More detail is provided in Table 8.

The amount spent on the operation was £408.00. The figure includes wages at 50p per hour, National Insurance contributions and travelling and telephone expenses. This gives a unit cost of 12p per sheet; on average a sheet took about 14 minutes to locate and record.

Exercise 2 July, 1971

This exercise was mounted in conjunction with the citation collection

TABLE 8

NUMBER OF SERIALS RECORDED AT EACH LIBRARY DURING EASTER 1971 DATA COLLECTION

Name of library	Total (approx.)
Advertising Association	100
British Library of Political and Economic Science (London School of Economics)	330
Department of Education and Science	100
Department of Employment	210
Department of Environment	90
Language Teaching Library (British Council)	390
National Institute of Economic and Social Research	90
Royal Institute of International Affairs	300
Royal Institute of Public Administration	350
Royal Geographical Society	70
Royal Statistical Society	30
Senate House	300
Social Survey	190
Tavistock Institute	280

(see DISISS Report B5). Its prime function was to complete the recording of the BLPES stock. This was desirable not only on grounds of the size and relevance of the collection but also because it would provide the file with much needed depth in the form of 'dead' and older material - particularly important to many of the intended bibliometric studies. [illegible] students were employed at the BLPES for three weeks during the summer vacation. The size of the labour force was dictated by the particularly confined conditions - much of the serial stock is housed in dark, narrow catacombs and access was not improved by the lack of a serial catalogue. (A catalogue is now in existence.) Fortunately, the students had all worked at Easter and were well equipped for handling such a situation.

1,600 records were collected, mostly of 'dead' material, annual reports and proceedings - categories of material which were hitherto poorly represented. There was about 4% duplication with material collected during April. This duplication can largely be attributed to variations in the forms of title. It is fairly common, especially in the cases of annual reports and proceedings for a serial to adopt different title arrangements from one year to another. 3% of the records were judged to be outside the scope of the social sciences. The amount spent on the project was £151.00, giving a unit cost of about 9p - a considerably better performance than the Easter exercise.

Exercise 3 September, 1971

The field work was undertaken at the BLLD by a research worker and a student from the PNL with the object of collecting material not available or not easily accessible in London. The particular attractions of working at the BLLD were that:

(a) It issued a list of its holdings of current serials on which we could indicate possible candidates prior to collection (one of our original intentions).

(b) The working conditions were ideal - clean, airy, light and plenty of room for consultation.

(c) The shelf arrangement, alphabetical by title, was particularly helpful to our type of search. The arrangement afforded direct access and its consistency promoted a degree of confidence in the searcher.

(d) The collection was large and included much foreign language material (an estimated 7,000 titles in 1971, and c.10,000 in stock or on order by late 1974).

The collection continued for two weeks in which time 1,100 records were collected, 2% of these being duplicates. The amount spent was £76.60 (including subsistence expenses but not the salary of the researcher), giving a unit cost of about 6p. This was the lowest figure recorded to date and reflected the superior working conditions at the BLLD.

Exercise 4 September, 1971

The object of this exercise was to collect full bibliographic details for the titles cited in the citation studies but not already on CLOSSS. One research worker from the PNL was involved and the data was collected in several London libraries, in addition to the BLLD.

Approximately 1,000 records were collected, the bulk of these coming from the BLLD. The rate of collection had now stabilized at 9-10 records per hour.

Supplementary data collections

As new titles came to notice and gaps became evident, new data was added to the file. This is a continuing process and is necessary if the file is to retain a 'current' value. In addition, a special collection of secondary services has been made. Much of this work had to be done from bibliographical sources as secondary services do not appear to 'travel' well - few libraries in the U.K. have good collections of foreign secondary services.

6.0 EDITING

As has been pointed out in previous sections, over half of the data sheets returned were incomplete in one way or another. This deficiency had to be made good with information from bibliographies. This was not wholly satisfactory for the following reasons:

(a) bibliographical control is weaker in the social sciences than in sciences and it was quite often impossible to obtain all the relevant details in any bibliographical source. Thus we could neither guarantee finding all the likely serials, nor trace all the relevant bibliographical details, if we had to rely on bibliographies for our information.

(b) while good bibliographical sources existed at The Polytechnic of North London (where the work was undertaken) and in London generally, a large number of the sources were simply not readily available in this country. The country's collection of bibliographies of foreign social science serials appears to be inadequate, perhaps seriously so.

(c) very few bibliographical sources provide sufficient detail for our purposes. Even the embryonic ISDS can be faulted on that count. Thus, while the particular serial may be recorded in a bibliography, the information we required about it was seldom given. There is a real need for comprehensive bibliographies that provide full details of serials.

(d) much of the data provided in bibliographies of serials is out of date. As this is not always obvious, complete reliance on information from bibliographic sources is dangerous and, if possible, should be avoided. In any case cross checking should be routine. The currency of the information should not be judged by reference to the imprint because they will seldom coincide. Updating or compiling a bibliography is such a lengthy task that the information will seldom be current up to within a year of the imprint. Given that serial details change a lot, currency of information is most important.

(e) published bibliographies often contain a number of errors. Many of these errors can be attributed to the fact that entries are often taken either from the data in other bibliographies, thus perpetuating any existing errors, or from questionnaires mailed to publishers or agents. The information obtained by the latter method is often suspect, and is not a good substitute for personal inspection.

(f) tracing information in bibliographies is time-consuming. So many sources exist and so many search strategies are possible that tracing one piece of information can be quite complex. Faced with the vast array of bibliographies, all differing in currency, scope, coverage, format, organisation and bibliographic detail, it is difficult to feel fully confident that a search has been complete.

It was therefore unfortunate that we had to rely quite heavily upon bibliographies to supplement the information recorded at source. Because of their known unreliability, several of the most commonly used bibliographies were tested. An example of one of these tests, in this case for Ulrich's International Periodical Directory, is given in Table 9.

Usually the most difficult details to obtain from a bibliography are those to do with the origin and history of a serial - beginning date, change of title and dates of change. These are also the details most prone to error in bibliographies. Other information not readily available include price, coverage by secondary services, whether articles have abstracts, and number of articles per issue/volume. The omission of the last two in bibliographies can be attributed in part to their difficulty of discovery and in part to the method of compilation, based upon second-hand information.

TABLE 9

AN APPRAISAL OF ULRICH'S INTERNATIONAL PERIODICALS DIRECTORY[1]

Major problems encountered in using Ulrich to obtain bibliographical information

(i) data incorrect
(ii) incomplete serial records - data fields missing
(iii) strong United States bias
(iv) data not current

An analysis of 571 serial records contained in Ulrich have provided the following figures which support and quantify the above statements.

data incorrect		
records in which errors were found	48	8%
source of error		
frequency statement	12	
beginning date	16	
subscription details	20	
data incomplete		
records in which not all of the essential bibliographical details are given	120	21%
data elements most commonly missing		
no price	41	
no beginning date	75	
no frequency	14	
U.S. bias		
number of U.S. records in Ulrich	344	60%
in CLOSSS	1161	23%
in World List of Social Science Periodicals	114	10%
data not current		
records not updated since previous editions	51	9%
not updated since 1969	51	
not updated since 1967	17	

---

[1] 13th edition 1969-70

To this can be added the general reluctance of bibliographers to meet the needs of those requiring more than just identifying information. Serials and the use made of them have altered greatly over the last few decades, and consequently the requirements for serial bibliographies have altered too. In addition to the features named above - the inclusion of abstracts with articles and the number of articles per volume - a much more detailed description of a serial's content should be provided. This information should be based upon the analysis of at least one year's issues and not a single issue, as is so often the practice. A list of the sources most often used for checking and tracing purposes is given in Appendix 3. Inclusion in the list does not necessarily indicate value or approval of a bibliography but its availability.

Editing and quality checks on the data were carried out simultaneously. Editing involved examining the sheets to rectify obvious errors. In addition several quality checks were made at regular intervals throughout the editing operation, and involved going back to the source of the information and comparing the data given on the sheet with that provided in the serials. The checks demonstrated that opinions regarding subject scope and what constituted an article (in determining the number of articles) differed. This was regarded as inevitable, and the more important problem of blunders and errors in recording data was considered to be small enough to be tolerated.

It was not practical to extend the editing until every record was complete. Table 10 gives an idea of the 'completeness' of the data in each field.

TABLE 10 COMPLETENESS OF RECORDS

Field	of 5504 separate serials:		of 3909 current serials:	
	No. filled in	%	No. filled in	%
1 TITLE	5504	100	3909	100
2 SUBTITLE	372	7	274	7
3 ALTERNATIVE TITLE	496	9	388	10
4 PREVIOUS TITLE	607	11	506	13
6[1] ENDING DATE INFO.	4936	90	3909	100
7 FREQUENCY	4772	87	3724	95
8 ISSUING BODY (NAME)	2452	44	1683	42
9[2] ISSUING BODY (CODE)	4979	85	3593	93
10 PUBLISHER	4763	87	3706	95
11 COUNTRY	4965	90	3766	96
12 REGULAR/IRREGULAR	4743	86	3690	94
13 TYPE OF SERIAL	4683	85	3635	93
14 TYPE OF CONTENT	4565	83	3521	90
15 ABSTRACTS	4144	75	3163	81
16 LANGUAGE	4608	84	3653	94
17 SUBJECT	4761	87	3697	95
18 NO. OF ARTICLES	4066	74	3161	81
19 PRICE	3165	66	3065	78
20 SECONDARY SERVICE MENTIONED	346	6	315	8

[1] Information for field 5 is not available.

[2] Where Field 8 is absent, this code is based on Field 10.

7. PROGRAMMING WORK

The computer used was an ICL 4.50 at the University of Bath. Almost all the programs were written in the Usercode assembler language.

7.1 The machine file : file structures and record format

A magnetic tape file of the data was considered most suitable for handling and manipulating the data for the needs of the DISISS project, and would also be fairly straightforward to convert for use on another computer system.

The magnetic tape file contains one variable length record for every title of a serial (field 01), so that there is a separate record for every title variation. Records are held in ascending sequence of their 5 digit record number (CLOSSS number).

Because of the variable nature of the data, each data field is included in the record in the form : field code/data/end of field marker. Each record commences with the record number (CLOSSS number, field 00), and terminates with an end of record marker in place of the end of field marker after the last data field in the record. Where the data in a field consists of more than one item, e.g. a number of alternative titles or languages, each item in the data field is separated by a data separator.

There were various reasons for arranging the file in this manner. Fixed length data fields would have been extremely wasteful of space, although individual fields would have been easier to manipulate since all field codes, field separators and end of field markers would have been eliminated. The best compromise would have been to have a mixture of both fixed and variable length data fields. However, it was felt more important to keep the format of each record in ascending field code sequence, and if a number of fields had to be treated as variable length, then it was as well to treat all fields in this way and maintain the field code sequence. Advantages of using variable length data are that individual fields can contain either coded or uncoded data without distinction, and records with incorrect codes can still be created. Also with variable length data fields, it is necessary to allow any space in the record fow fields which are not present. The file updating routine is used to delete, insert, and replace complete CLOSSS records.

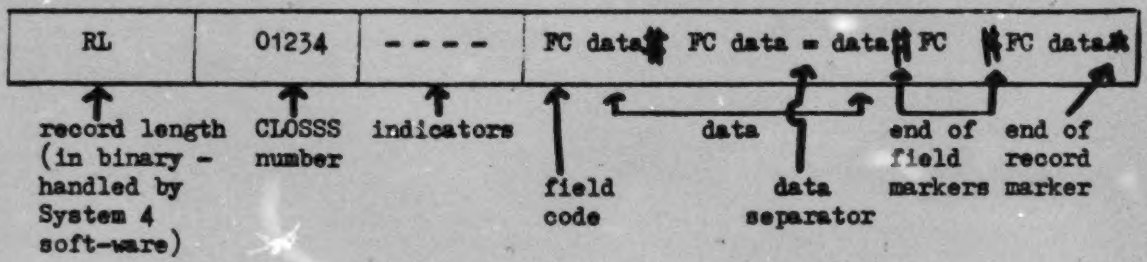
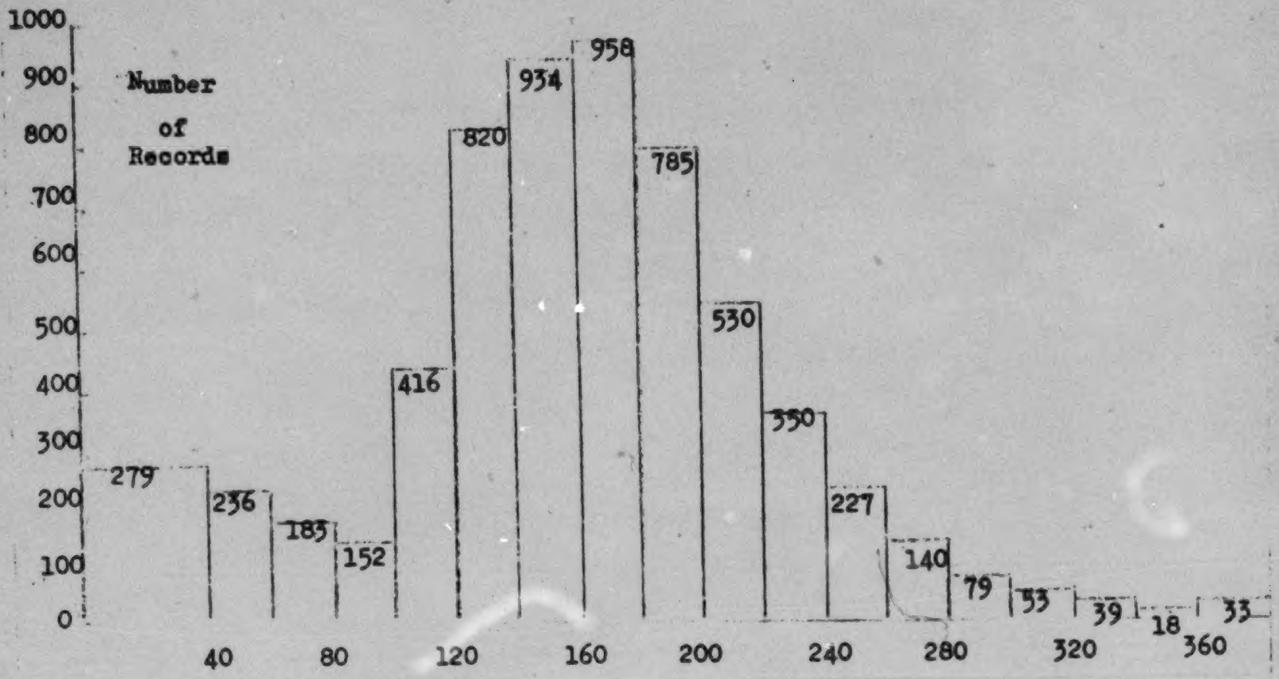

RL
01234
- - - -
FC data FC data = data FC FC data*
record length (in binary - handled by System 4 soft-ware)
CLOSSS number
indicators
field code
data
data separator
end of field markers
end of record marker

Figure 1. Diagram of main components of a CLOSSS record

Individual fields in each record are arranged in ascending field code sequence. Each field consists of a 2 digit field code in the range 01 to 22, followed by the data, followed by an end of field marker ( ). Each separate item in the data field is separated by a data separator (=). For the last field in the record, the end of the field marker is replaced by an end of record marker (*). The field code for the record number (00) is not inserted in the record. Between the record number and the data fields a space of 4 characters has been left. Originally it was the intention to insert various indicators in these spaces to specify properties of each record. Only one has been used, to flag records failing the data vet procedure.

The only restrictions on fields are that no particular data item may exceed 250 characters in length, and that the total record length must not exceed 960 characters in length (equivalent to 12 punched cards). In fact the average record length is approximately 180 characters, although records of over 500 characters have occurred. Figure 2 gives the breakdown of the file according to record lengths.

Figure 2. Record lengths



N.B. These figures are the lengths of the record excluding the 4 character record length field, see figure 1.

There is no index to the fields within a record included in the record format. Such an index would have occupied a large amount of space to be of any use, and on retrieving a record, the index would have to be interpreted in some way. It was felt better to have no index, but to scan each record immediately after it is read and to create a comprehensive location table indicating where each field commences and the number of such fields present.

7.2 Punching the Data

The main issues considered were the choice of input medium and the organisation of the work in cooperation with the Computer Unit at Bath University. For punching variable length data it was initially considered that paper tape should be used. However, the punch operators in the Computer Unit were more familiar with using 80 column punched cards, and so it was decided to use cards instead. There were considerable difficulties with the handwriting and the unwieldy layout of the sheets; but eventually the punching rate (including verification) settled down to about 200 records in 6 hrs. The average working rate was about 400-600 records per week.

7.3 Data Vetting and Creation of CLOSSS file

The file updating program was developed fairly carefully through the following stages. First, a program to print out the individual fields in each record was written (see fig. 3). This was expanded so that old format[1] field codes were converted to their new format equivalents, and the fields in each record were sorted into ascending field code sequence. The last occurrence of a particular field code in the record was taken to be the more correct data for the record; this was useful because it enabled corrected data to be added to the end of the existing record. Coded data fields were translated, and the translated data together with the codes were printed. Uncoded data fields were checked to ensure that they contained only valid characters, e.g. either numeric or alphanumeric. For numeric fields comments were printed to make the numbers more meaningful. Messages were printed out against entries which appeared to be invalid or required checking. The machine data vet was supplemented by proofreading the print out of the records produced, so care was taken to make the listing as clear as possible to facilitate checking of the data.

---

[1] During data collection some improvements were made to the layout and coding of data sheets which, at the input stage, made it necessary to distinguish between the earlier and final versions of the data.

See Appendix 4 for illustration of sheets.

Figure 3

Proof reading list

```
15          ALL ART. ABSTRACTS    (1)

16          FRENCH              (FRE)

16          DUTCH               (DUT)

17          SOCIAL SCIENCES           (AA)

17          HISTORY                   (JA)

18          16 ARTICLES

19          f 16.03

*******************************************************************************

00          00229

01          AFRIKA

03          MAANDBLAD VAN HET AFRIKA INSTITUUT

05          1966

06          CONTINUING             (X)

07          12 ISSUES PER YEAR

08          AFRIKA INSTITUUT

09          ASSOCIATIONS           (A)

10          AFRIKA INSTITUUT

11          NETHERLANDS            (NE)

12          PERIODICAL             (1)

13          PERIODICAL JOURNAL     (A)

14          ARTICLES               (A)
            BOOK REVIEWS           (F)
            NEWS ARTICLES          (J)

15          10 ART. ABSTRACTS      (3)

16          DUTCH                (DUT)

17          SOCIAL SCIENCES           (AA)

18          100 ARTICLES

19          F 1.67

*******************************************************************************

00          00230

01          AFRIKA HEUTE

05          1963

06          CONTINUING             (X)

07          26 ISSUES PER YEAR
```

Figure 4(a) A/Z list of titles

2949.	04037		01		DEMOCRAZIA SOCIALE IRREDENTA, PRIMO CONGRESSO GENERALE	:K,X,IT
2950.	05607		01		DEMOGRAFIE	: ,A,
2951.	06673		01		DEMOGRAPHIC YEARBOOK	:I,X,US
2952.	04909		01		DEMOGRAPHY	:A,X,US
2953.	06674		01		DEMOS	: ,X,GW
2954.	04910		01		DENGI I KREDIT	:A,X,UR
2955.	01110		01		DEPARTMENT OF EMPLOYMENT GAZETTE	:G,X,UK
2956.	04326		01		DEPARTMENT OF SCIENTIFIC AND INDUSTRIAL RESEARCH, REPORT OF THE RESEARCH COUNCIL	:J,1965,UK
2957.	04911		01		DEPARTMENT OF STATE BULLETIN	:A,X,US
2958.	04630		01		DEPARTMENTAL COMMITTEE ON CRIMINAL STATISTICS, REPORT	:J,X,UK
2959.	04830	*	01		DERECHO DE LA INTEGRACION	:A,X,AG
2960.	01111		01		DESIGN	:A,X,UK
2961.	04674		01		DEUTSCH-BRITISCHE RUNDSCHAU	:A,1932,GW
2962.	01113		01		DEUTSCHE ALS FREMDSPRACHE	:A,X,GE
2963.	01114		01		DEUTSCHE AUSSENPOLITIK	:A,X,GE
2964.	03186	#	01		DEUTSCHE AUSSENWIRTSCHAFT	:A,-,GW 00756
2965.	00756			04	DEUTSCHE AUSSENWIRTSCHAFT	:A,X,GW
2966.	03531		01		DEUTSCHE FINANZWIRTSCHAFT	:A,X,GG
2967.	03580		01		DEUTSCHE FUR AUSLANDER	:A,X,GW
2968.	04727	#	01		DEUTSCHE GESELLSCHAFT FUR WEHRPOLITIK UND WEHRWISSENSCHAFTEN	:I,1936,GG 04718
2969.	04713			04	DEUTSCHE GESELLSCHAFT FUR WEHRPOLITIK UND WEHRWISSENSCHAFTEN	:I,1939,GG
2970.	02959		01		DEUTSCHE KOLONIAL-GESETZGEBUNG	:A,1909,GG
2971.	04138		01		DEUTSCHE KOLONIAL-ZEITUNG, MONATSSCHRIFT DES REICHSKOLONIAL-BUNDES	:A,1943,GG
2972.	03126		01		DEUTSCHE NATIONAL BIBLIOGRAPHIE	:F,-,GG
2973.	03872		01		DEUTSCHE RUNDSCHAU	:A,-,GW
2974.	04912		01		DEUTSCHE SCHULE	:A,X,GW
2975.	01736			02	DEUTSCHE ZEITSCHRIFT FUR EUROPAISCHES DENKEN	:A,X,GW
2976.	05608		01		DEUTSCHE ZEITSCHRIFT FUR WIRTSCHAFTSKUNDE	: , ,
2977.	03373		01		DEUTSCHER BEAMTEN KALENDER	:I,-,GG
2978.	02935		01		DEUTSCHER GEIST	:A,1935,GG

Figure 4 b)**Record Dump**

```
00164X  #01ADOLESCENCE#02INTERNATIONAL QUARTERLY DEVOTED TO THE PHYSIOLOGICAL, PSYCHOLOGICAL, PSYCHIATRIC, SOCIOLOGICAL AND EDUCATIO
NAL ASPECTS OF THE SECOND DECADE OF HUMAN LIFE#051966#06#074#09#10LIBRA PUBLISHERS INCORPORATED#11US#121#13A#14AFCL#153#16ENG#170
A#RE#1822#19615*

00165X F#01ADULT EDUCATION - A JOURNAL OF ADULT EDUCATION#051926#06X#074#09A#10NATIONAL INSTITUTE OF ADULT EDUCATION#11UK#121#13A#14AJ
F#151#16ENG#17EA#1826#19219-2106259*

00166   #01ADULT EDUCATION#03JOURNAL OF RESEARCH AND THEORY IN ADULT EDUCATION#051950#06X#074#08ADULT EDUCATION ASSOCIATION OF THE U
NITED STATES OF AMERICA#09A#10ADULT EDUCATION ASSOCIATION OF THE UNITED STATES OF AMERICA#11US#121#13A#14AF#151#16ENG#17EA#1812#1958
1*

00167   #01ADULT DEVELOPMENT AND AGING ABSTRACTS#051968#06X#074#08NATIONAL INSTITUTE OF CHILD HEALTH AND HUMAN DEVELOPMENT, SCIENTIF
IC INFORMATION CENTERS BRANCH#09C#10UNITED STATES DEPARTMENT OF HEALTH, EDUCATION AND WELFARE#11US#121#13B#14BF16ENG#17PE#180#190*

C0168X  #01ADULT EDUCATION(AUSTRALIA)#051957#06X#074#09C#10COUNCIL OF ADULT EDUCATION(VICTORIA)#11AT#121#13A#14AJF#153#16ENG#17EA#18
24#1936*

00169   #01ADULT EDUCATION IN FINLAND#051964#06X#074#08KANSANVALISTUSSEURA#09A#10KANSANVALISTUSSEURA#11FI#121#13A#14A#153#16ENG#17EA
#1816#19615*

C0170X  #01ADULT LEADERSHIP#051952#06-#071#09A#10ADULT EDUCATION ASSOCIATION OF THE UNITED STATES OF AMERICA#11US#121#13A#14AFJ#153
#16ENG#17EA#1864#19353#20EDUCATION INDEX*

C0171X  #01ADVANCE#051914#06X#07A#09D#10UNIVERSITY OF MANCHESTER INSTITUTE OF SCIENCE AND TECHNOLOGY#11UK#121#13A#14A#153#16ENG#17LA
#1866#1962#20BRITISH TECHNOLOGY INDEX*

00172  F#01ADVANCED MANAGEMENT JOURNAL#04JOURNAL OF THE SOCIETY FOR THE ADVANCEMENT OF MANAGEMENT=ADVANCED MANAGEMENT#051942#061968#
074#08SOCIETY FOR THE ADVANCEMENT OF MANAGEMENT#09A#10SOCIETY FOR THE ADVANCEMENT OF MANAGEMENT#11US#121#13A#14AC#153#16ENG#17LA#184
6#19373#2106095*

00173X  #01ADVANCEMENT OF SCIENCE#051939#06X#074#09A#10ACADEMIC PRESS#11UK#121#13A#14AFG#153#16ENG#17AA#1811#19300*

00174   #01ADVANCES IN CHILD DEVELOPMENT AND BEHAVIOUR#051963#06X#074#08ACADEMIC PRESS#09B#10ACADEMIC PRESS#11UK#121#13A#14A#153#16E
NG#17NA#1824#19529*
```

54

55

The program was developed into a program to create data onto a magnetic tape, and as a result a trial file of the first 700 CLOSSS records was produced. The created program was then modified to produce the update program, which embodied the following record handling facilities:

(i) insertion, replacement and deletion of complete records,
(ii) modification of existing records, which involves insertion, replacement and deletion of complete fields within a record,
(iii) listing and reprocessing records,

together with the necessary error recovery procedures.

Throughout the whole development period small changes were made to the data vetting procedures. The final data vet requirements are described in Appendix 5. The complete CLOSSS file was then created using the final version of the update program, and was spread over a period of approximately 10 days.

7.4 Proofreading, Updating and Listing

To enable the proofreading to be done effectively, two programs were developed, the Alphabetic Titles program and the Dump Listing program. Examples of the printout from both these programs are shown in Figure 4.

The Alphabetic Titles program suite produced an alphabetic listing of all titles in fields 01,02,03 and 04 with various coded fields printed, and served as an index to the file. This was first used to delete duplicate entries from the file. The Dump Listing program produced a compact list of each record, in CLOSSS number order. These, together with the proofreading listings, were the working lists for the file, and were used extensively when the citation file was linked to the CLOSSS file (described in DISISS Report B5). This work on the citation file revealed further social science journals not present on CLOSSS. All the obvious social science titles were added to CLOSSS as records containing titles only, and then, where possible, complete CLOSSS records for these titles were collected and added to the file.

For each CLOSSS record with a former title, a CLOSSS record was made up for the former title, and these former title records were linked to their subsequent title entries by using field 22 to contain the record number of the subsequent title. Also, fairly complete data for a number of secondary services, criminology and law serials were collected and added to the file. All these records then had to be proofread and corrected. This earlier work on the CLOSSS file is reported more fully in DISISS Working Paper No. 8.*

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* CLOSSS : a machine readable data base of Social science serials - progress report 1971-1972. Bath University Library, 1973.

7.5 Modification to the CLOSSS records

There were two modifications to the file which had become apparent in the light of working with the data and developing ideas for its analysis and use.

The first amendment concerned the analysis of fields which could contain multiple-coded entries. It was obvious that for the bibliometric studies it was necessary to count the occurrences of the combinations of these groups of codes. Therefore it was necessary to ensure that records containing multiple-coded entries held the codes in the same sequence, i.e. to ensure that records containing, say, languages English and French, and French and English were identical. This was achieved by writing an update program which read and indexed each record, sorted the codes in each field with multiple-coded entries into alphabetical sequence, and then output the rearranged data, printing messages indicating which fields had been sorted in each record. The opportunity was taken of ensuring that all codes in the particular fields examined were unique by printing an error message and setting the error flag when identical codes in a field were detected.

The second modification concerned the indexing of the file. As mentioned previously, for each record with a former title, a record for the former title had been made up and inserted in the file. However, although there was a forward link in that the former title record contained a field 22 holding the record number of the subsequent title, there was no backward link. Originally it had been decided that at the editing and coding stage, the former title in field 04 would have been crossed out and replaced with the record number of the former title record. For various reasons this had not been done, and so the backward link information was missing. Therefore it was decided that for records with a former title, field 21 would be used to hold the record number of the former title record.

FIGURE 5. EXAMPLES OF LINKAGE BETWEEN FORMER AND SUBSEQUENT TITLES

```
01623   #01 CURRENT TITLE#04 FORMER TITLE#other fields   #2103261*
                                                            ↑
03261   #01 FORMER TITLE# other fields #2201623*         points backward
                                          ↑              to the former
                                     points forward      title record
                                     to the subsequent
                                     title record
```

The data required for this was punched from an alphabetic listing of the file, sorted, and used to update the file in the normal way. Figure 5 gives an example of the result of this amendment. To help to eliminate any errors, a program was written to analyse particular characteristics of each record in the updated tape and to print a message whenever an inconsistency was detected.

7.6 Analysis of CLOSSS

The Alphabetical Titles and Dump Listing programs provided the initial bibliographical work, and so the immediate need was to attempt the analysis.

Four suites of programs were written to analyse the CLOSSS data.
These programs were called i) Code Analysis program
ii) Time Analysis program suite
iii) Length Analysis program
iv) Code Combinations Analysis program suite

The Code Analysis program analyses the data in all the coded fields, all the fields containing either numeric or coded data, all the numeric fields except field 05, and also counts the number of fields present in title type fields (fields 01,02,03,04,08,10,20,21 and 22). For each record included in the anlysis the occurrence of each coded element is counted in a table for the field code, either individually for single element fields, or as one of a number of elements (up to a maximum of 6 depending on the field code) for fields where multiple elements can occur. Numeric fields are treated as coded fields by coding their numeric values into groups (e.g. for field 18, 20-29 articles, 30-39 articles, etc.). The number of occurrences of title type fields was also counted up in a table. At the end of each analysis the table for each field code is printed out, and for single element fields percentages of the total count for the field are calculated. Examples of the tables produced by this program are given in Appendix 6.

The Code Analysis program has provided the bulk of the material for the bibliometric work, and has been run for a number of different groupings of data, shown in Table 11, and for a number of more complicated groupings.

Table 11. CODE ANALYSIS RUNS

i) the complete file, all titles, serials, and current serials,

ii) for serials both current, and current and dead at certain dates and for serials and current serials:

iii) for each major subject area,

iv) for each form of serial,

v) for individual countries and for various groups of countries,

vi) for each type of issuing body,

vii) for serials having abstracts with articles

viii) for serials which are free.

The Time Analysis program suite consists of two main programs. The first program analyses the starting and ending dates (fields 05 and 06) for each record included in the analysis, and builds up a table indicating how many serials commenced publication, continued, and ceased publication in each year. At the end of each analysis this table is printed out, and the data is also written to a workfield. When all the analyses for the current run have been completed the second program reads the data in the workfile and plots graphs showing the growth in the number of serials published over time for each analysis, combining the individual analyses on each graph as required. Examples of the tables produced and the graphs plotted by these programs are given in Appendix 6.

Table 12 gives the groups of serials for which the Time analysis and length analysis programs were run.

Table 12. Time and length analysis runs

Groups of serials	Time analysis	Length analysis
The complete file	x	x
Individual countries and groups of countries	x	
Each major subject area	x	x
Each form of serial	x	x
Serials current at certain dates		x

The Length Analysis program was written to analyse the total record length, the publication period (field 06 minus field 05), and the length in characters of the title type fields containing alphanumeric data (fields 01,02,03,04,08,10, and 20) for each record included in the analysis. These numerical values are coded into groups as in the Code Analysis program, and the occurrences of each code is counted in a table for the item. At the end of each analysis the table for each item is printed with the percentages of the total count for the item calculated. Examples of the tables produced by this analysis are given in Appendix 6.

For certain coded fields, namely nature of contents (field 14), language of contents (field 16), and subject coverage (field 17), the Code Analysis program did not produce an analysis of the data in sufficient detail. The Code Combinations program suite was therefore written to produce an analysis of the combinations of codes which existed for these fields. For each field 14, 16 and 17 in the file a record containing the complete contents of the field was formed. These records were then sorted, and identical records counted. The occurrence of each combination of codes for each field was printed with the percentage of the total number of records for the field calculated. This analysis program has been run for serials and for current serials. Examples of the printout produced are given in Appendix 6, and a list of all the analyses of CLOSSS is given in Appendix 7.

7.7 Running the Analysis Programs

From the list of analyses of CLOSSS required it was possible to group records according to general characteristics which resulted in the following three main groups:

i) all titles - every record
ii) all serials - every record with no subsequent title field 22
iii) current serials - every record with field 06 coded X

Within these overall groups it was then necessary to group records according to particular characteristics, e.g. by subject coverage (field 17), by country of publication (field 11), by form of serial (field 13), etc. As well as considering a particular characteristic as an individual element within a field, it was also necessary to consider a characteristic as a set of elements from within a field and as a set of elements for various fields.

Obviously it was necessary to analyse as many different groups of serials as possible during one run of an analysis program. As each individual analysis required a complete scan of the CLOSSS file it was necessary to arrange for the file to be scanned a number of times in each run. To enable the correct records for each scan to be selected from the file and included in the current analysis, each analysis program was written in two sections, a main program and an option subroutine.

For each scan of the file the main program read a data input card containing an analysis parameter together with a title for the analysis, and handled the reading and indexing of the CLOSSS records. Having indexed a record, i.e. located all the fields present, the record was presented to the option subroutine which examined particular data elements according to the current analysis parameter. The main program then included or ignored the record in the analysis according to the selection flag set by the option subroutine. At the end of each scan, the tables constructed by the analysis were printed out together with the analysis title. The next input card was then read, and the process repeated.

Thus the amount of programming work necessary was kept to a minimum because having written the main program, the various selection procedures required in the option subroutine could be easily and quickly written.

The techniques described above were used in the Code Analysis, Time Analysis and Length Analysis programs described in section 7.6, and also for the Dump Analysis program described in section 7.9. Although a complete set of analyses could be built into one option subroutine, the number of analyses which could be run together was limited by the number of pages of print-out of 200-250 pages was considered reasonable, which allowed up to about 12 individual analyses from the Code Analysis programs. Thus it was often necessary to split certain groups of analyses into two or more separate program runs.

7.8 Development of a Program Generator

As the analyses progressed, the number of option subroutines increased and two interesting points concerning them were noted. Firstly, for many of the analyses on the various fields in CLOSSS the option subroutines written consisted of a number of groups of virtually identical sets of statements, differing only in parameters related to the particular field being selected; and secondly, that as the complexity of the analyses increased, the option subroutine consisted of a number of these sets of statements in sequence. It became clear that it was possible to define each set of statements as a "macro" instruction with the various parameters as entries in the instruction. Thus an option subroutine could be automatically generated by supplying the required macro instructions together with the correct parameters. This meant that a great deal of programming effort would be saved, and the chance of making an error greatly reduced. A number of macros have been written to select specific functions such as number of fields present, groups of codes, numeric values and title keywords. Further macros have been written to allow for different selection procedures according to the analysis parameter, as well as to select specific codes according to the current analysis parameter. Development of these ideas should cater for the handling of the date of publication fields, and a complete tidying up of all the macros to allow a compact and useful enquiry system to be developed.

7.9 Indexing and bibliographical work

One of the simplest ways of quickly obtaining bibliographical listings of CLOSSS was to incorporate the use of option subroutine techniques (described in section 7.7) in the Dump Listing program to produce a listing of all records with particular characteristics. As this was relatively easy to do, a number of different dumps of the file were produced, and details of these are given in Appendix 7.

Three areas of bibliographical analysis are considered in this and the following sections, i) keyword-out-of context (KWOC) lists, ii) alphabetical lists, and iii) a complete print of the file to provide a comprehensive bibliography.

The first area which was attempted was the production of KWOC lists. A fairly small stopword list was constructed and the necessary program suite written to produce a subject orientated KWOC listing of all titles in fields 01, 02 and 03, together with their associated subject content field 17 translated if present. The results proved encouraging and the initial stopword list was expanded to include many more irrelevant words. The program suite was rerun to produce a very interesting KWOC catalogue of CLOSSS, illustrated in figure 6.

The usefulness of this index prompted the idea of constructing a list of keywords which are form-of-serial orientated, in order to produce a similar list of CLOSSS titles with these keywords together with their associated form of serial, field 13, translated if present. Virtually all of these keywords had been included as stopwords in the previous analysis.

7.10 Possible future program development

Of further interest would be both an alphabetical listing and a KWOC listing of the data held in fields 08 (issuing body) and 10 (publisher). A fairly small stopword list has been constructed for the KWOC listing. Unfortunately a large number of records exist with fields 08 and 10 either identical or virtually identical, and these records will have to be tidied up before either of these analyses can be attempted. This tidying is also necessary for the complete listing program discussed later in this section.

It is also useful to produce alphabetic listings of titles in CLOSSS for particular subject areas, forms of serial, and for individual countries as well as groups of countries. To do this it would be possible to modify the existing Alphabetical Titles program to allow option subroutine techniques to be used (see section 7.7), but this would not provide very satisfactory results. Many records in the file contain references to other records via fields 21 and 22, and in any alphabetical listing it would be desirable to indicate these title changes by including the actual titles together with other information wuch as dates of publication. To achieve this it is necessary to create two files of the data, firstly an Index Sequential file of CLOSSS on disc, and secondly a list of record numbers in alphabetical title sequence. Both these files are relatively easy to create from the magnetic tape file of CLOSSS. Each record in the CLOSSS disc file is then accessed in alphabetical title sequence, i.e. in random record number sequence, and if any particular record contains references to other records in the file, these records can then be accessed and the necessary data retrieved. Incorporating facilities for including enquiry subroutines discussed in the previous section in this program would allow the production of highly specialised alphabetic title lists.

Having developed the handling of CLOSSS as an Index Sequential file, it will be fairly straightforward to produce a complete listing program. This will reformat each record so that each field is neatly printed, all the coded fields translated, and the necessary data retrieved from other records in the file, together with explanatory comments to provide a complete bibliography. An outline of the print format for this has been drafted, but a detailed layout has yet to be finalised.

Working with the CLOSSS file to produce the various listings described above may shed light on necessary modifications to the record

format. This could be done by expanding the existing entry in field 10, or could be achieved by using field 12 which at present virtually duplicates data held in field 13. Also the record format could be expanded to include such fields as ISSN, a code for the library where the data was collected, together with an indicator of the currentness of the record, and also a field for general comments about the serial.

There are a number of records in the file which contain only very brief information, and it would be useful to collect more data from these serials, as well as to collect complete records from new and previously unrecorded serials.

Part 2

Description of CLOSSS

8.0 INTRODUCTION

As a file designed for bibliometric analysis, CLOSSS has in some ways succeeded too well. In the time available to us we have not been able to pursue all the topics, many of which require further programming and linking of fields, so we have had to select certain major areas which are reported here. Some other aspects of the study are considered in Report A3, which looks at CLOSSS in relation to other bibliographies, and compares serial production with that of monographs, both generally and between various countries.

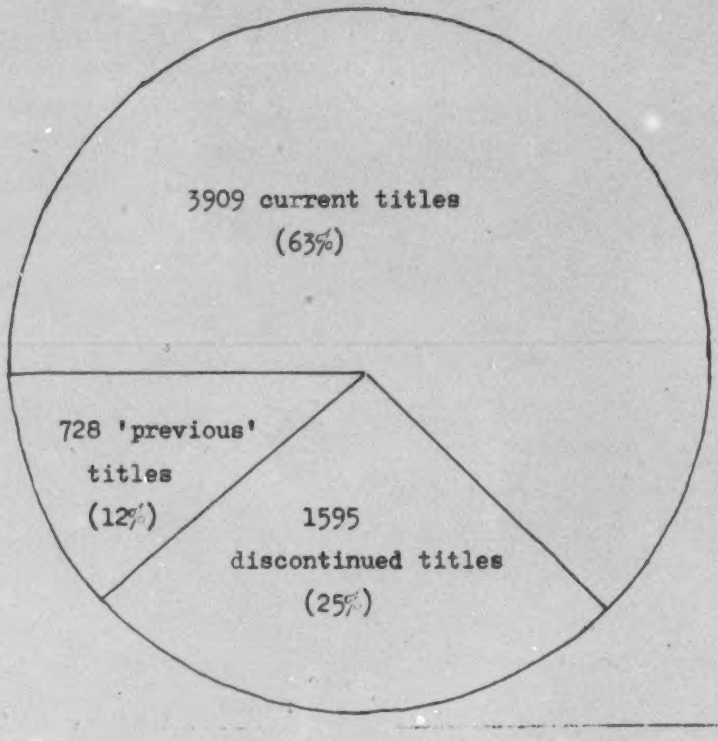
Here we give first a general description of the serials, providing an idea of the overall holdings by British libraries of social science serials. This is also a framework against which the more detailed picture can be set. Work is next reported on form and content, issuing body, publication patterns and subjects.

9.0 COMPOSITION OF CLOSSS FILE

The CLOSSS file has at present, (1974), 6,232 records, covering present and previous titles of all serials recorded. The vast majority of records are for serials current to-day. Some are for serials which have ceased publication, and the remainder are records for the former title or titles of serials. There is a separate record for every title change.

Figure 7

Present state of the file

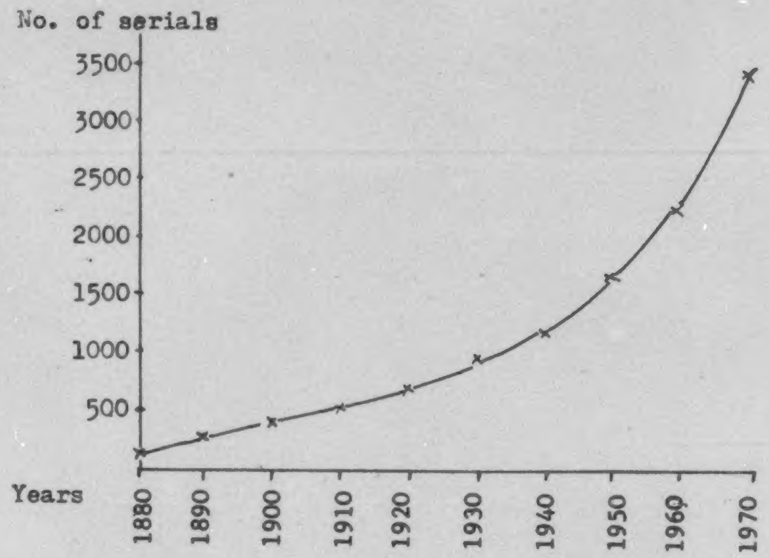


Records for titles later continued under another name are not included in the analyses, except when the analyses relate to a date at which they were current. Almost all analyses were done for both current titles and current and discontinued titles together. Most results show very little difference between them, so normally tables are given for all serials - i.e. current and discontinued together (a total of 5504 records). Sometimes, where it makes more sense (e.g. price), only current serials are used, in which case the table specifies this. Where there is a noticeable difference, both sets of figures are provided. Analyses on specific fields include only those serials for which the data is available, therefore the totals vary in some cases.

Dates when the serial began, and if applicable, when it ended were recorded. Figure 8 shows how numbers of serials have increased in the last 100 years.

Figure 8

Growth in the number of serials



Despite an apparently over-expanding market some serials do cease publication. Figure 9 gives an indication of 'deaths' amongst serials on CLOSSS. The file was examined for the number of deaths, at 10 year intervals; there is the possibility of a year being atypical therefore.

Figure 9

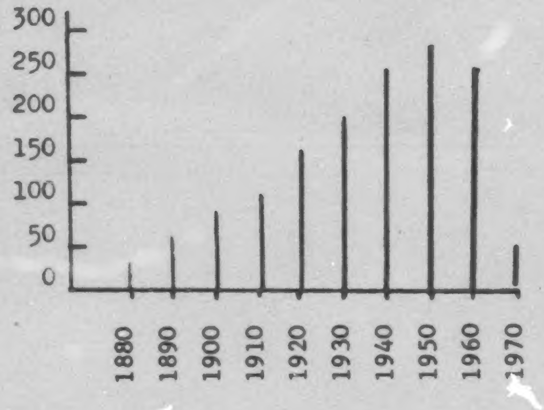


Figure 9a Number of serials ceasing publication in specific years.

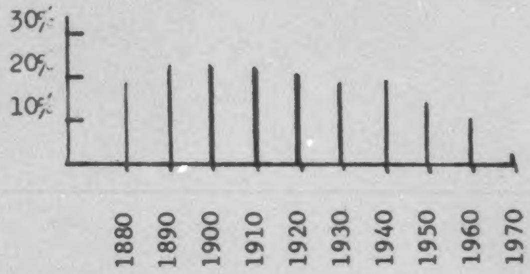


Figure 9b Number of serials ceasing publication, as % of total current in specific years

It should be noted that the proportion of serials ceasing publication is decreasing steadily, although the actual numbers go up until 1960. Clearly the figures are not up-to-date; much of the data was collected in 1971 - too soon for some deaths to be apparent. This may possibly apply to 1960 also.

9.1 Titles

Three types of secondary titles were recorded when available.

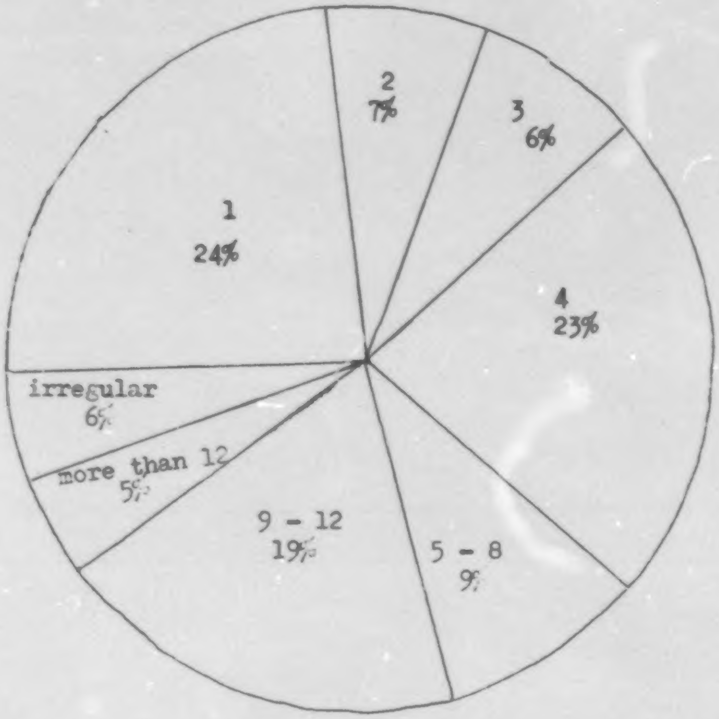
Serial with:		% of 5504 (All serials)	
Subtitle	372	7	
Alternative title	486	9	
Previous title	607	11	(13% of current serials had previous titles)

Some serials of course have both a subtitle and an alternative title or titles. Most serials with an alternative title had only one: normally either a statement of the sponsoring body or a translation of the main title. Of the 607 serials with previous titles a fifth had 2 or more.

9.2 Frequency

60% of the serials are, or were, published 4 or less times a year. This is partly due to the large numbers (c. 10%) of annual reports on the file. Monthlies (16%) and weeklies (3%) account for a smaller proportion of the total.

Figure 10 Number of issues per year



9.3 Issuing body and publisher

The term 'issuing body' is used for the organisation which controls the content of the serial, as distinct from the organisation which prints and distributes it (i.e. the publisher). Obviously sometimes these jobs are done by the same organisation. Where there is no separate issuing body, the publisher is regarded as having this function. This is the case with 51% of the serials. The word 'sponsoring' is used synonomously with 'issuing'.

Societies or associations are the commonest sponsors (32%), followed by educational institutions (20%). Commercial publishers with no other sponsoring body, are responsible for 18% of the file, government bodies for 13% and international organisations for 5%. Fuller details of issuing bodies are given in Section 13.

9.4 Country

Because the serials on the file were all found in British libraries there is a marked predominance of UK publications, greater even than American. 62% of the serials are or were published in Europe, 26% in America, 5% in Asia, 3% in Africa and 2% in Australasia.

A more detailed breakdown is given in Table 13, and DISISS final report A2 section 2 discusses the publishing patterns of various countries more fully, comparing the CLOSSS list with other bibliographies.

Table 13 Country of Publication

	No. of serials (4608)	%
UK	1574	32
USA	1161	23
France	322	6
W. Germany	232	5
Italy	137	3
Holland	101	2
Switzerland	106	2
East Europe & Russia	218	4
Other Europe	353	7
Australia, New Zealand and South Africa	153	3
Canada	95	2
India, Pakistan and Ceylon	101	2
South & Central America & W.I.	140	3
Japan	56	1
Other	214	4

9.5 Language

The serials were given a language code according to the languages actually used in the volumes checked. Most of them use or used only one language.

single language	4038	88%
two languages	351	7%
more than 2	219	5%

As expected, English is far and away the most used language, occurring in 81% of all serials. Table 14 gives the main languages used.

Table 14 Languages most used

	No. of all serials (4608)	%	No. of single language serials (4038)	%
English	3710	81	3208	80
Frehch	705	15	337	8
German	442	10	221	5
Spanish	181	4	122	3
Italian	132	3	83	2
Russian	91	2	28	1

French, Russian and German occur more frequently as one of two or more languages than they do alone. This may be partly due to the tendency of British libraries to buy serials with English as at least one of the languages used. English as a single language has a higher proportion of the file than one would suppose from the country breakdown. This may be due to foreign serials having English editions, which were recorded without it being obvious that there were other language editions. The position of English is further augmented by the practice of some serials, particularly Scandinavian and Dutch, to publish only in English.

Only 91 (2%) of the serials indicated that they had editions in other languages. These were as follows:

Table 15	Different language editions
French	36
Spanish	17
German	12
English	12
Russian	7
Other	7

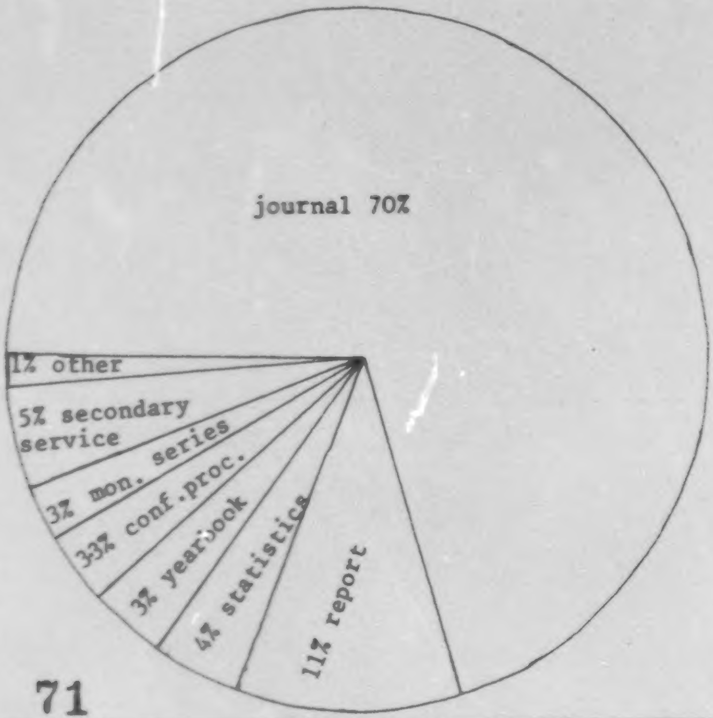
These figures probably under-estimate the editions available because of the lack of information in the serial itself.

9.6 Type of serial

Of the 15 forms of the serial listed on the collection sheet, 7 each accounted for less than 1% of the serials. These are index, index to research, accessions list, contents list, legal/legislation, book reviews and case notes. The first 4 of these have been counted in with abstracts (2.5% of the serials) and bibliographies (1%) and called secondary services. The remaining 3 have been put in the "other" category. Figure 12 illustrates the resulting division of the file.

Figure 11

Types of serial



9.7 Type of contents

These were 13 categories and any number of these could be recorded for each serial. In practice most serials had one, two or three types of content.

The next table gives the total occurrence of each type of content, expressed also as a percentage of the number of serials for which this field was filled in. The percentages add up to more than 100, because the categories usually occur with others. The only category which usually occurs on its own is conference proceedings.

Table 16 Types of content

	Total serials with type	% of 4565
Articles	3547	78
Book reviews	1649	36
News articles	1483	32
Statistics	835	18
Conference proc.	492	11
Bibliographies	441	10
Review articles	434	10
Abstracts	251	5
Case notes	186	4
Indexes	125	3
Contents lists	105	2
Accessions lists	50	1
Other	339	7

9.8 Abstracts

Most serials do not provide abstracts of the articles they print. Figures for CLOSSS are shown in Table 17. 294 (5%) of the serials provided abstracts in a language different to the main text; these are shown in Table 18.

Table 17 Abstracts with articles

	No. of serials (4144)	%
All articles have abstracts	536	13
Some articles have abstracts	190	5
No abstracts at all	3418	82

Table 18 Language of abstract when different from main text

English	137
French	62
German	44
Russian	26
Spanish	13
Other	12

9.9 Number of articles

The number of articles in a year was recorded for each serial and the breakdown is as follows:-

Table 19 Number of articles per serial and per journal

	No. of serials (4066)	%	No. of journals* (2875)	%
None	492	12	85	3
1	496	12	32	1
2 - 9	476	12	355	12
10 - 19	670	16	583	20
20 - 29	518	13	489	17
30 - 39	327	8	314	11
40 - 49	217	5	206	7
50 - 99	428	15	409	14
over 99	442	11	403	14

* The figures for journals are included in those for serials, as journals are a subset of serials

Clearly some types of serial (e.g., statistics, secondary services) are unlikely to have any articles. The 12% of serials with only one article is largely accounted for by yearbooks and annual reports, which often include one major article.

About three-quarters of the serials have fewer than 50 articles a year. Even so, the output of articles in 1969 from serials on the CLOSSS file was over 90,000.

9.10 Price

This information was collected for the volume published in 1969, and it is therefore somewhat out of date. We give it for what it is worth, however, as the relative proportions in different price brackets may not have changed much.

Table 20 Price in 1969

	Whole file (3065 serials)	UK (1021 serials)	US (808 serials)
Less than £3	46%	55%	29
£3 - £10	34	22	53
more than £10	4	5	5
free	9	12	7
members only	2	4	1
price varies	4	2	5

9.11 Coverage by abstracting and indexing services

This field was filled in only if the information was actually stated on the serial. It applies mainly to American serials, which are better at giving this sort of information, and it is not an indication of coverage by secondary services generally.

Table 21 Number of serials indicating coverage by secondary services

	No. of serials
Covered by 1 publication	187
" " 2 publications	82
" " more than 2 publications	77

Only 6% of the serials carry this information.

9.12 Subject

The 'subject' fields is complicated because subjects occur both singly and with one or two others. Also, views as to what constitutes a 'single' subject are unlikely to be identical.

Table 22 Serials with 1, 2 or 3 subjects

	No. of serials	
Single subject	3876	81%
Two subject fields	795	17%
Three subject fields	90	2%

Twenty-two major subject areas were coded, most with subdivisions. Of these, 7 (Archaeology, Architecture, Geography, History, Philosophy, Psychology and Statistics) were coded only when social science aspects of the subject were covered by the serial, or when it was linked in the serial with a social science subject. Archaeology is very often linked with anthropology, for instance. The subject coding Social Sciences (General) was used for serials like New Society but also for serials 40% of whose content is social science - (e.g. Science, New Scientist). These serials are really interdisciplinary but are not coded as such. In retrospect, it would have been useful to have recorded this.

Two of the subjects (Ergonomics and Futurology) occur so infrequently as to be scarcely worth analysing. They are included here but are excluded from most of the subject analyses in Section 8.

Table 23 is an attempt to present an overall picture of the subjects represented on CLOSSS.

Table 23 Subjects of serials on CLOSSS

	Total no. of serials covering subject	% of 4761*	No. of single subject serials	% of 3876 single subject serials
Anthropolgy	147	3	93	2
Archaeology	48	1	25	1
Architecture	54	1	16	-
Criminology	52	1	38	1
Economics	1370	29	1047	27
Education	475	10	345	9
Ergonomics	17	-	7	-
Futurology	6	-	5	-
Geography	214	4	157	4
History	131	3	71	2
Law	204	4	148	4
Librarianship	91	2	79	2
Linguistics	265	6	171	4
Management	157	3	97	3
Philosophy	35	1	18	-
Planning	165	3	83	2
Politics	802	17	545	14
Psychology	273	6	212	5
Social Science	402	8	325	8
Social Welfare	315	7	213	5
Sociology	282	6	141	4
Statistics	58	1	34	1

* 4761 is the number of serials with subject coding.

The total of this column is more than 100 because subjects may occur with one or two other subjects.

By far the largest subject is economics, followed by politics and education. Subjects with more than 5% of the serials are as follows:

Table 24 Major subjects in order of prominence	% of 4761 serials
Economics	29
Politics	17
Education	10
Social Science	8
Sociology	6
Social Welfare	7
Psychology	6
Linguistics	6

It must be stressed that any subject coding carries a certain subjective element; also the specificity of the subject headings provided affect the size of a subject. For example, economics would be smaller if transport and banking were separate; sociology would be larger if criminology and social policy were not separate. There is a certain arbitrariness about it, some of which may be reduced by the clustering studies (see DISISS Final Report B6).

10. FORM OF SERIAL

10.1 Different forms

The various forms of serial represented on CLOSSS are shown in Table 25

Table 25	ALL SERIALS			CURRENT SERIALS		
FORM OF SERIAL	No.	%				
Journal	3260	69		2623	72	
Report	495	10		361	9	
Statistics	202	4		163	4	
Yearbook	165	3		84	2	
Conf. Proc.	139	3		70	1	
Mon. Series	135	2		107	2	
Abstracts	115	2.5	4.8	100	2.8	5.0
Bibliography	47	1.0		38	1.0	
Indexes	30	.6		25	0.7	
Index to Research	13	.3		6	.2	
Accessions list	9	.2		4	.1	
Contents list	8	.2		8	.2	
Legal/legislation	15	.3	1.4	11	.3	1.2
Book reviews	9	.2		9	.2	
Case notes	9	.2		7	.2	
Other	32	.7		19	.5	

Journals are easily the commonest form, followed at a distance by reports. In the rest of the analyses secondary services have been grouped together, as shown above; and the four small miscellaneous categories have been grouped together as 'other' (including the small 'other' category which is one of the group). The main 6 forms are considered separately throughout, but are reported fully only when they are different from the patterns reported in section 9 for the whole file.

10.2 Journals

There are over 3,000 journals on CLOSSS, some 2,600 of which are current. Journals occupy 70% of the file, and thus have a major influence on the overall patterns. Because they are such a large category it might be useful in future work to divide them into subcategories, perhaps along the lines of the division attempted for articles (ordinary, news, and review) - although this division is not easy to make precisely. (Some work on news journals is reported in report A3).

39% of journals are issued 3 or 4 times a year (compared with 30% of the whole file). 34% are sponsored by associations and societies, and another 26% are sponsored either by publishers or educational institutions.

54% of journals are published either in the UK or the USA; and a further 31% in the rest of Europe. These proportions are similar to those of the whole file, but the position of English among languages is slightly weaker - see Table 26.

Table 26 Journals and Language

	Whole file	Journals
English	81%	76%
French	15%	17%
German	10%	10%

The figures add up to more than 100 because some serials have more than 1 language

60% of journals have either 2 or 3 varieties of content; usually articles plus either book reviews or news articles or both.

In no subject do journals account for less than 50% of the serials, and in most cases they provide over 70%. Journals are least well represented in social policy (55%) and economics (59%), and most in linguistics (92%) and psychology (89%).

10% of journals list the secondary service(s) in which they are indexed (whole file : 6%). Journals are also obviously more likely to provide abstracts of their articles than other forms; this is discussed in Section 11.13.

10.3 Reports

Reports occupy 10% of the file. Their presence, perhaps more than that of other forms, is largely influenced by the libraries where the data was collected, as 69% of the reports are published in the UK, and they represent 22% of the UK output of serials.

70% of the reports have been going for 20 to 30 years, are published in Egnland once a year, contain one article and no abstracts, are written in English, and deal with economics, politics or social policy. 30% also contain some statistics.

10.4 Statistics

Most serials consisting of statistics are published by governments (59%) compared with only 13% of the whole file. They are mainly annual or twice yearly, usually in economics (68%) or social science general (19%).

10.5 Yearbooks

Over half the yearbooks on CLOSSS have ceased publication, although for 26% the ending date is not known. They are issued mainly by publishers or by associations, and contain mainly articles, news articles and statistics, and 'other' - presumably lists of members and events not specified in the content categories.

10.6 Monographic Series

These are overwhelmingly published by educational institutions (60%). 96% of them come out irregularly, and most contain articles only. 60% of monographic serials are published in the USA, compared with 23% of all serials on the file. Subjects best represented are given in Table 27.

Table 27 Subject and Monographic Series

	% of whole file	% of total monographic series	monographic series as % of subject
Anthropology	3	18	16
Economics	30	32	3
History	3	8	8

In economics there is a big difference between the 2nd and 3rd columns of the table; for although 32% of all monographic series are in economics, only 3% of economics serials are monographic series. Anthropology and history favour monographic series much more as a form of publication.

10.7 Conference Proceedings

Again almost half of all Conference Proceedings on CLOSSS are no longer published. Conference Proceedings show the slowest growth of the forms studied. Issued chiefly annually by associations or international organisations, they are the form most often having a sponsor different from the publisher (81%). 64% of conference proceedings are in either economics or politics.

10.8 Secondary Services

These have more subtitles and alternative titles than any group of journals - curious in publications seeking to improve bibliographic control although perhaps due to their aim to be multi-national, and to explain precisely what they are.

Secondary services are issued mainly by associations (34%) and educational institutions (21%), and more than a third are American. Table 28 gives further details of country and language of secondary services.

Table 28 Secondary services: Country and language

	% of whole file	% of secondary services
USA	23	36
UK	32	26
France	6	9
English	81	82
French	15	17

30% of all secondary services are coded as social science general, and a further 15% are economics. In fact, 15% of all 'social science general' serials are secondary services, compared with 2% of economics serials, and similarly low percentages of other serials. This suggests a tendency to treat the social sciences together for bibliographic control.

10.9 Changes in form since 1880

The journal has not always been quite so dominant. Figure 13 illustrates the relative positions of journals, from 1880 to 1970. The proportion of journals has increased from 57% to 74% at the expense of conference proceedings, reports and yearbooks. The relative position of other forms has remained stable. This may to some extent reflect changes in the library collections used.

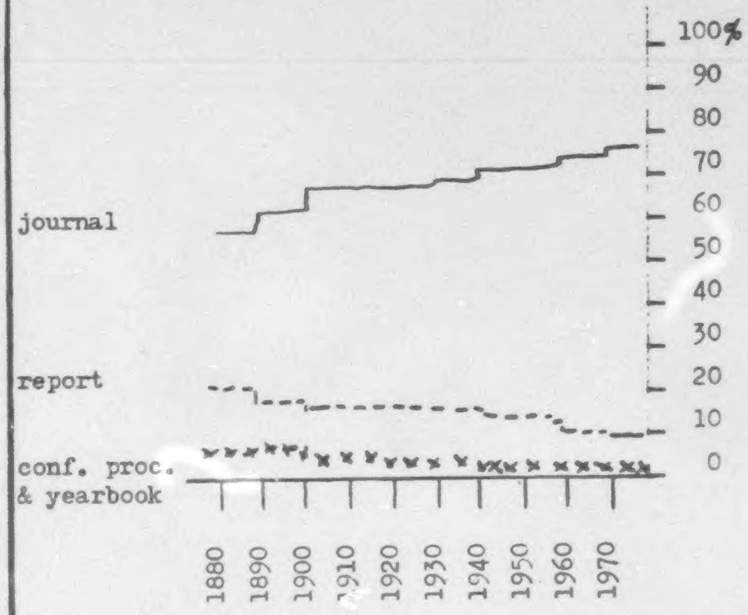


Figure 12 FORM and TIME A
Number of JOURNALS, REPORTS, CONFERENCE PROCEEDINGS & YEARBOOK in given years as % of total serials current that year.

Although the share of the total has not increased for any form but journals, the actual numbers have gone up, though at differing rates. By 1920 half of the 1970 conference proceedings total had been reached; journals, statistics and monographic series reached half their totals by 1930; the slowest grower till 1960 (and fastest since) was the secondary service. One way of illustrating the growth of different forms is to show percentages, in different years, of the total current in 1970, as in Figure 13.

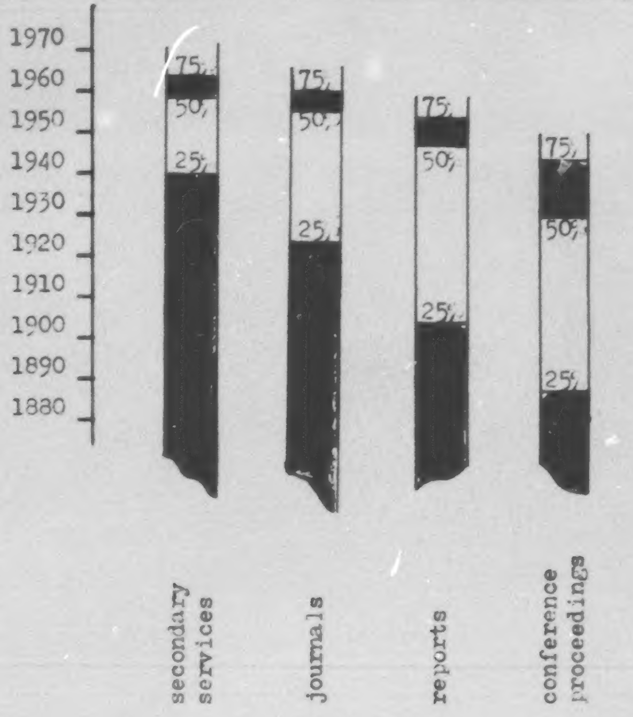


Figure 13 FORM and TIME B
Proportion of 1970 totals
current since 1880.

10.10 Subject and form

Differences in form between subjects are not great, as Figure 14 shows. The journal of course, dominates every subject, but particularly psychology, geography and linguistics, where no other single form provides as much as 5% of the serials. In criminology, economics and social policy reports play a larger part than they do elsewhere, although as a single form (i.e. not counting secondary services) they are second to journals in all but 6 subjects. Apart from reports in criminology and in social policy, no form other than the journal provides more than 18% of the serials in any one subject. **Appendix 8 gives the figures for all subjects.**

Conference proceedings are most in evidence in management, social policy and politics, but over half of those in politics are no longer being published. The incidence of conference proceedings may seem low in many subjects considering the part conferences are assumed to play in communication; however; conference proceedings as type of content rather than form of serial occur in over 10% of the serials of 14 of the subject areas.

Some types of publication are more likely to cover two or more subjects than others, although the differences are not enormous. Table 29 gives the figures for major forms.

Figure 14. Subject and form: types of serial providing 5% or more of each subject

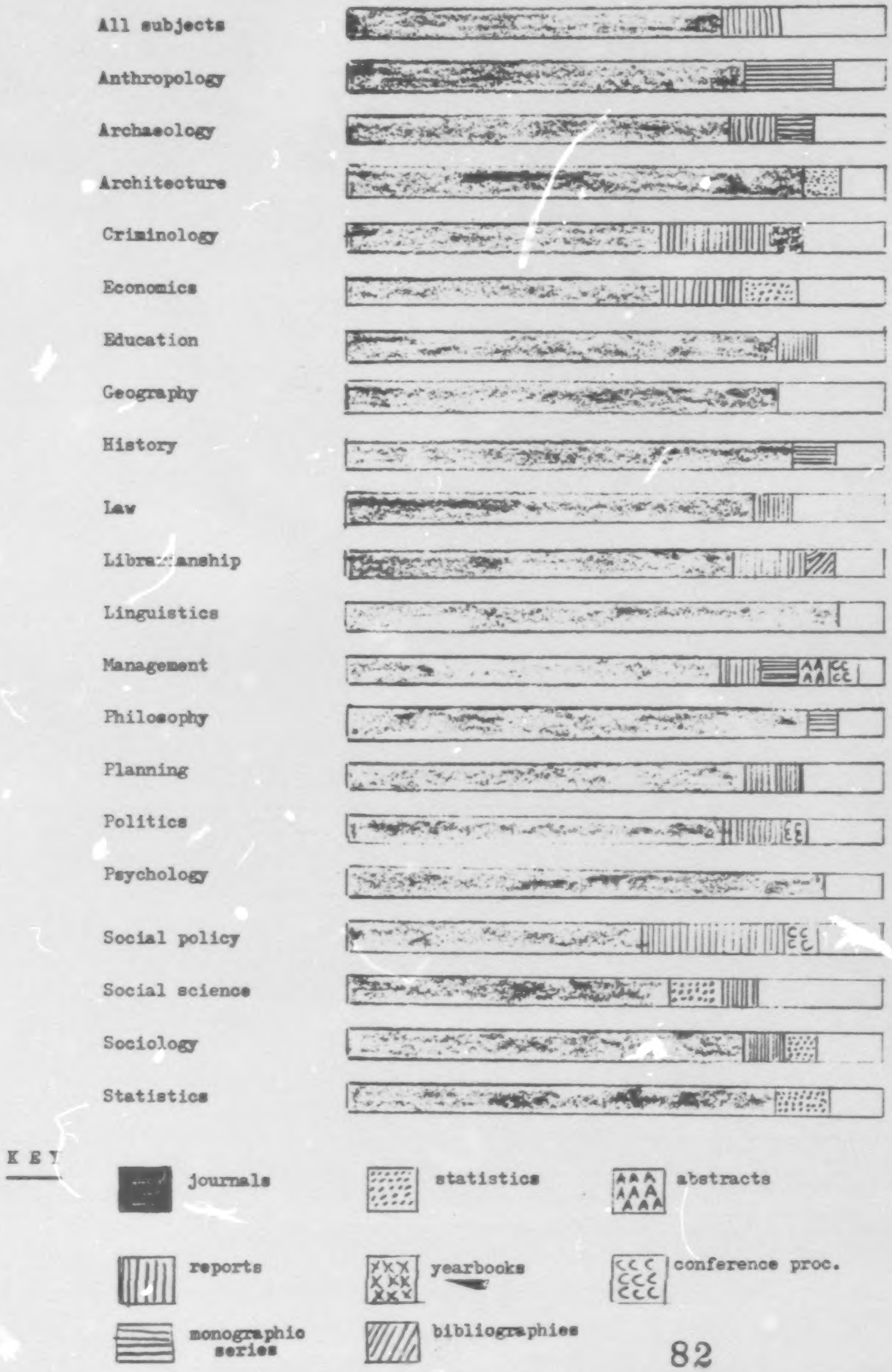


Table 29. Subject and form: % of serials concerned with 2 or more subjects

Conference proceedings	19
Monographic series	16
Journals	15
Statistics	14
Secondary service	13
Reports	12
Yearbooks	11

10.11 Form and country

Table 30 shows the variation in forms from country to country. Again it is not great because the journal occupies such a large section of the output in every case. It is important to remember that these figures reflect the serials held by British libraries; had the data been collected in other countries, the picture would not necessarily be the same. In particular, the high figure for reports as a percentage of British serials is almost certainly due to collection bias.

Table 30 Form and Country: Percent of the serials of a country in specified forms (values under 5% are not given)

	Journal	Report	Statistics	Yearbook	Mon. Series	Conf. Proc.	Secondary Service
UK	58	22	5	5			
France	81						7
W. Germany	75			5	5		5
Belgium	79	5					
Italy	82		5				
Netherlands	70					5	12
Switzerland	68	10	9			6	
E. Europe	86						6
India	80						7
USA	72	5			5	5	7
Canada	83						
Australia	74	9			5	7	
Other	74	7	9				
Whole File	70	11					5

10.12 Form and content

60% of journals have either 1 or 2 types of content: all other forms are likely to have only 1 type. Table 31 shows the variations between forms

Table 31 Number of types of content

% of serials with	1	2	3	4	5	6	types of content
Journal	21	31	32	12	3	1	
Report	55	38	5	2			
Yearbook	55	30	12	2	2		
Secondary serv.	63	29	7	1			
Mon. series	77	18	1	3			
Conf. proc.	88	7	2	2			
Statistics	93	7					
Whole file	35	29	24	9	2	1	

Only if the content of a serial was almost exclusively made up of statistical data, was the serial coded 'statistics' in the form field, and a similar criterion was applied to conference proceedings. This explains the high figures in column 1 of Table 31 for these two forms. Table 32 gives the types of content occurring in 20% or more of the serials of each form.

Table 32 Contents occurring in 20% or more serials

	Journal	Report	Statistics	Year book	Mon. Series	Conf. Proc.	Sec. Services	Whole File
Articles	92%	82%		44%	95%			78%
Book revs.	50%							36%
News articles	42%			27%				32%
Statistics		31%	98%	24%				
Conf. proc.						96%		
Bibliographies							28%	
Review articles								
Abstracts							51%	
Indexes							24%	
Other				55%				

11. CONTENTS OF SERIALS

This section analyses serial contents in more detail. The content of the serials, coded into a possible 13 categories, with no limit to the number occurring in any one serial, is discussed in terms of subject, country, issuing body and form of serial. Variety of contents and co-occurrence of groups of codes are also explained. The general tables for the whole file are given in Section 9.

11.1 Subject and content

Type of content varies quite a bit from subject to subject particularly the less frequently occurring types such as statistics or case notes.

Table 33 gives for each subject the percentage of serials containing a certain category. Major categories only are covered. Percentages add up to more than 100 because there is usually more than one type of content in a serial.

Table 33 Subject and Content

Percentage of serials in each subject with:

	articles	book reviews	news articles	statistics	conf. proc.	biblio-graphies	review articles
Anthropology	92	38	18	7	10	19	9
Archaeology	83	44	33	-	12	14	-
Architecture	87	41	72	13	-	8	9
Criminology	80	44	36	16	18	14	4
Economics	71	24	29	39	9	6	5
Education	86	41	48	5	7	10	27
Geography	80	34	27	22	9	19	2
History	93	60	22	3	6	22	12
Law	83	54	20	5	14	9	7
Librarianship	74	48	42	3	5	23	4
Linguistics	88	51	40	2	8	10	41
Management	81	43	34	15	12	3	4
Planning	86	35	47	15	14	12	6
Politics	73	32	40	10	13	6	7
Psychology	93	51	25	8	15	18	11
Social Science	64	36	27	18	7	12	8
Social Welfare	78	41	34	16	14	3	4
Sociology	80	42	20	20	13	11	10
Statistics	82	41	25	61	12	-	6
Whole file	78	36	32	18	11	10	10

11. 2 Country and content

Only major serial producing countries, or groups of countries, were considered. Differences in content between them are not great; where there is a noticeable variation it is mentioned in the discussion of individual contents below.

11.3 Issuing body and content

The various types of issuing body are related to the contents of a serial; in some cases the relationship is clearly casual (e.g. a high proportion of serials published by government or commerce contain statistics; and international bodies include more conference proceedings).

Table 34 gives the details. Again the percentages add up to more than 100.

Table 34 Issuing Body and Content

Percentages of serials with:

	articles	book reviews	news articles	statistics	conf. proc.	biblio-graphies	review articles
Associations	81	43	38	12	18	11	9
Publisher	82	42	38	10	5	6	11
Government	63	18	25	44	4	6	6
Educational Institution	87	43	20	15	8	12	14
Political Group	71	21	50	9	16	1	1
International	65	26	36	20	24	14	9
Commerce	61	7	30	46	3	3	4
Private	61	32	61	26	9	4	17
Whole file	78	36	32	18	11	10	10

11.4 Form of Serial

The form of the serial has a major effect on the contents. This is discussed in Section 10.12 above where a full table is given. Interesting points are mentioned in Sections 11.5 to 11.12 below.

11.5 Articles

A distinction was made between articles, news articles and review articles, and they were coded separately. Ordinary articles occur in 78% of all serials on the file.

When serials are broken up into groups by subject, country or issuing body, articles still occur more frequently than any other type of content. Over 90% of history, anthropology and psychology serials have articles in them. The lowest figure in subject groups is general science with 64%. Usually articles occur with one or two other sorts of content; in anthropology, geography and social welfare they occur more often on their own. 37% of anthropology serials have no content other than articles, this is probably connected with the relatively high proportion of monographic series in anthropology.

97% of Canadian serials contain articles. At the other extreme is the UK, 72% of whose serials have articles. UK serials form the largest group on the file; but they also have one of the smallest proportions of journals, (58%) and the highest of reports (22%). Clearly this is because the collection was made in English libraries.

Sponsoring body makes little differences to the major position of articles (the range is from 87% - educational institution, to 61% Commerce) but of course form of publication does.

The figures are given in Table 35.

Table 35 ARTICLES AND FORM OF SERIAL

	% of serials containing articles
Journal	92
Report	83
Statistics	5
Yearbook	42
Mon. Series	95
Conf. Proc.	8
Sec. Serv.	4
Whole file	78

11.6 Book Reviews

36% of all serials contain book reviews. By subject highest are History (60%) and Law (54%). Only 32% of Politics and 24% of Economics serials have book reviews; these are the two largest subjects on the file.

The inclusion of book reviews varies considerably between different issuing bodies. This is shown in Table 36.

Table 36 Book Reviews and Sponsor

Sponsor	% of serials containing book reviews	% of journals
Associations	43	74
Publisher	42	85
Government	18	40
Educ. Institution	43	79
Political Group	21	58
International	26	58
Commerce	7	42
Private	32	83
Whole file	36	70

Sponsors with a lot of book reviews are also those with high proportions of journals or monographic series or both. Dividing serials into groups by form, we find that 50% of journals contain book reviews, but only 1% of monographic series, and 8% of yearbooks.

11.7 News articles

News articles are the third most common type of contents, occurring in 32% of all serials. Within subjects, however, their numbers are much more varied than those of articles or book reviews. Architecture has 72% of its serials with news articles; next highest, but far behind is education with 48%. Subjects with relatively few news articles are anthropology (18%) law (20%) sociology (20%) and history (22%).

Presence of news articles is not much affected by country of publication, but the sponsoring body is likely to have an influence. Serials issued by governments (25%) or educational institutions (20%) less often have news articles than those of political groups (50%) or private individuals (61%).

Form of serial is again a considerable factor; news articles occur in 42% of the journals on the file, in 26% of the yearbooks, and in 17% of reports.

11.8 Statistics

18% of all serials contain statistics as a specific element, not just figures contained in an article; it is the fourth most frequently occurring type of content. Statistical items occur in 61% of serials classified as Statistics, and in 39% of Economics, and 22% of Geography serials.

Subjects whose serials least often contain statistics are Linguistics (2%) Librarianship and History (each 3%), and Law (5%). The 48 Archaeology serials contain no statistics at all.

Only 9% of Soviet bloc serials contain statistics, compared with 26% of Indian ones, and 21% of UK serials.

Serials issued by governments or by commerce are more than twice as likely to contain statistics as those of most other sponsors.

Table 37 illustrates this, together with the form of serial of the sponsor.

Table 37 Statistics and sponsor

Sponsor	% of serials containing statistics	% statistics (as form of serial)
Association	12	1
Publisher	10	1
Government	44	20
Educational	15	1
Political Group	9	1
International	20	7
Commerce	46	12
Private	26	9
Whole file	18	4

Nearly half of the government serials with statistics in, contain nothing else. Statistics also occur quite often in reports (31%) and yearbooks (24%).

11.9 Conference Proceedings

Conference proceedings as part of the contents of a serial occur in all subjects but Architecture. They seem to play the largest role in Criminology in which 18% of serials contain conference proceedings and Geography (22%), and the smallest in Librarianship (5%) and History (6%).

Divided by country of publication, most groups have conference proceedings in about 10% of their serials. Belgium has 16% and Switzerland, doyenne of international conference hostesses, has 23%. Not unexpectedly the sponsor most often including conference proceedings is the International Organisation (24%), while Associations have 18%. Proceedings are poorly represented in the publicationsof Government (4%), Publishers (5%) and Commerce (3%).

11.10 Review Articles

Review articles occur in 10% of serials, however as some are bound to have been coded as ordinary articles, it can be assumed that this is an underestimate of review articles in social science.

Subjects whose serials most often contain review articles are Linguistics (41%) and Education (27%). Archaeology has none; in Social welfare, Criminology and Librarianship serials they occur 4% of the time, and in Economics 5%.

By country, review articles are present in between 7% and 13% of serials, except for Switzerland, where only 1% of the serials contain review articles.

Obviously journals relatively often contain review articles (13%), in monographic series they hardly occur at all and in yearbooks they are present 4% of the time.

11.11 Case Notes

Overall, case notes appear in only 4% of serials, but they are very unevenly spread. Most subjects have scarcely any; those with higher occurrences are Law (44%) Criminology (12%) and Psychology (11%). These three subjects often occur together in multidisciplinary serials. Suprisingly, only 2% of serials in Social policy and welfare contain case notes.

USA and Canada publish more serials including case notes than other countries, though for neither country do case notes occur more than 7 in 100 times. Neither sponsoring organisation nor form of serial make much difference to the presence of case notes in a journal.

11.12 Bibliographic information

This is information about other serials, (and non serials), and accessions lists Some of these occur in about 20% of the serials on the file. Bibliographies occur in 10%, abstracts in 5%, and indexes in 3%. Contents lists and accessions lists are rather infrequent, but they have been included in the general group of items offering bibliographic information. Book reviews have been considered separately above.

Statistics, Librarianship, Psychology, Criminology and Archaeology are the best providers of bibliographic information. Economics and Social welfare are the worst. Taking bibliographies alone, Librarianship, History, Psychology and Anthropology serials most often provide them, and Management least often. However, 17% of Management serials contain abstracts.

Countries most often providing bibliographic information are France and Belgium, but UK and Canada are among the lowest. Again, the UK figure may be due to collection bias, because the more obscure UK serials studied are less likely to contain bibliographic information, whereas the foreign serials in British libraries would represent a high average level.

By issuing body, International organisations and Associations are more likely to sponsor serials with this information. Serials of political groups and of commerce are very unlikely to contain any bibliographic data.

11.13 Abstracts with Articles

Only 18% (726) of the serials on CLOSSS provide abstracts with their articles. These include 212 serials providing abstracts in languages other than that of the articles. Although 79% of all the serials are current, 90% of the serials with abstracts are current, and most of them are quarterlies (43%, as opposed to 30% of all serials). Even if only journals are considered, only 22% provide abstracts.

Publications sponsored by Associations and Educational institutions are more likely to contain abstracts than those with other sponsors.

Table 38 Sponsors and Abstracts

Sponsor	% of whole file	% of serials with abstracts
Association	32	36
Educational Institution	20	30
Government	13	5

Despite the prominence of UK serials over the whole file, among the abstract providing serials the USA has the largest share. France and Germany also do better than their positions overall indicate, as shown in Table 39a. Table 39b compares UK and US serials and journals; the relatively greater difference between UK serials and UK journals indicates the influence of the libraries providing the data.

Table 39 Country and Abstracts with articles

a.

	% of whole file	% of serials with abstracts
UK	32	18
USA	23	36
France	6	9
W. Germany	5	7
E. Europe & USSR	4	8

b.

	No. of serials	% with abstracts	No. of journals	% with abstracts
UK	1420	8	859	12
USA	933	24	701	28

Almost all the serials providing abstracts are journals (91%). A further 3% are monographic series. Because of the dominance of journals, the major contents of the serials with abstracts have been compared with the picture for journals only, as well as for the whole file.

Table 40 Contents and Abstracts

a.	% of whole file *	% of journals *	% of serials with abstracts *
articles	78	92	94
book reviews	36	50	55
news articles	32	42	29
statistics	18	13	15
conf. proc.	11	10	13
bibliographies	10	11	19
review articles	10	13	13

* NB Percentages total more than 100 because serials often have more than 1 type of content.

b.

Single type of content	35	21	21
2 types	29	31	25
3 types	24	32	30
4 types	9	12	16
5 types	2	3	5
6 types	1	1	3

Serials with abstracts are similar in contents to all journals, except that they have a far lower proportion of news articles than most journals; and a higher proportion of bibliographies. Presumably the latter are merely another example of the consciousness of bibliographic control demonstrated also by the provision of abstracts. In having several types of content they are nearer to journals than to the whole file, with a slight tendency to have even more types of content.

The position of English is slightly weaker in these serials than it is overall, and correspondingly the other major European languages do better.

Table 41 Languages and Abstracts

	% of whole file using language *	% of serials with abstracts in given language *
English	81	72
French	15	22
German	10	14
Spanish	4	5
Italian	3	5
Russian	2	4

* includes multi-lingual serials

The relationship between subject and provision of abstracts is quite interesting, as Table 42 indicates. Psychology and Economics together account for 40% of all serials providing abstracts, although their relative shares of abstracts do not correspond with their positions on the file. Psychology serials are easily the best providers of abstracts - of the 310 serials covering the subject, 143 (46%) offer abstracts. For Economics the figure is only 10%. Geography and Anthropology serials do well; Librarianship, interestingly, is not specially good - only 16% of Librarianship serials provide abstracts. Worst of the major subjects is Politics, perhaps because of its higher proportion of discontinued titles, and short-lived pressure-group type publications. Social science generally is not well provided, but this category includes general news and comment journals, whose content is more difficult to precis, and perhaps thought to be less worth summarising for posterity.

Table 42 Subject and Abstracts

	% of whole file	% of all serials with abstracts (726)	% of subject total with abstracts
Anthropology	3	6	31
Criminology	1	2	21
Economics	30	19	10
Education	10	7	11
Geography	5	8	26
History	3	2	13
Law	4	6	21
Librarianship	2	2	16
Linguistics	6	5	13
Management	3	4	17
Planning	4	5	20
Politics	18	9	8
Psychology	7	20	46
Social science	8	5	9
Social welfare	7	6	13
Sociology	6	8	20

17% of the serials providing abstracts also list services in which they are abstracted or indexed. This compares favourably both with the whole file (96%) and all journals (10%). However, Psychology journals give the information 16% of the time; and US journals 20% of the time.

12 PATTERNS OF PUBLICATION

An element of confusion surrounds this topic; it is not always clearly understood that there are two frequencies - the intended or stated frequency, and the actual number of issues published in a year. For instance, a quarterly may nominally appear 4 times a year, but two issues may be combined. This merging of issues, perhaps due to a variable flow of contributions, perhaps a means of saving binding and contribution costs, is becoming increasingly common, with the result that frequency statements become inaccurate. On the other hand, an 'extra' issue may sometimes appear, perhaps containing the proceedings of a conference.

In cases where the frequency statement and the issue output are not the same both pieces of information should be recorded. Unfortunately, it is seldom that one can predict divergencies in the frequency pattern thus the information can often be gathered only retrospectively at a cost. Practically, the actual frequency is of more interest, as an indicator of currency of information and possibly as a measure of the reliance upon published information.

Five per cent of the serials examined had deviated from frequency patterns in 1970. Because of the difficulties of detection this is an under recording. Also the picture is likely to change from year to year. To iron out these minor often transitory fluctuations and to simplify comparison between data sets an element of grouping was introduced. Thus the issue values chosen show stated or intended frequency statements (see Table 43). Calculations however are based throughout this discussion on actual issue output and not the frequency statement.

As this discussion on frequency patterns is based upon current practices and no account is made of frequency changes during the life of a serial, findings can provide, at best, only an approximate picture. Until information is available on the far from uncommon practice of frequency change little else may be said about the figures without risk of misleading.

Table 43 Patterns of publication (the overall picture)

Issue pattern	Number of serials	Percentage of total
Less than yearly	309	6.5
1 (annual)	1131	23.7
2 (semi-annual)	318	6.6
3	249	5.2
4 (quarterly)	1205	25.3
5	37	0.8
6 (every 2 months)	423	8.9
7-9	94	2.0
10-12(monthly)	865	18.2
13-23	13	0.3
24-26(semi-monthly)	74	1.6
27-51	8	0.2
52 + (weekly)	133	2.8
TOTAL	4772	100.0

The overall social science picture suggests that three issue patterns predominate - annual, monthly and quarterly (Table 43). Two-thirds of the serial population pursue one or other of these issue patterns. Of these three patterns it is the quarterly one that is most characteristic of the social science serial population at large with over one quarter of the titles following a basically quarterly issue pattern.

Less than one quarter (23.9%) of the serial population appears monthly or more frequently. The significance of this is not immediately apparent. It is perhaps possible that this low percentage of frequently published journals lends a little support to the view that social scientists do not want much of their information currently or urgently. There is also, however, the likelihood that they are accepting a pattern which is largely dictated by economic considerations. Unfortunately we have not the necessary data to determine the relative strengths of these two arguments.

The type of issue pattern adopted by a serial is dependent largely upon five factors - amount of input received, the economic viability of the market, the subject, its function, and the issuing body. The following discussion is confined to an examination of only the last three factors, as it was not possible to obtain data easily on the size and industry of social science disciplines.

12.1 Subject

The influence of subject upon patterns is particularly noticeable in social science partly perhaps because it embraces such a diverse group of subjects, and differences between subjects are quite marked. Looking at an issue profile for each subject (Table 44) considerable differences are evident; each subject area has its own peculiar publishing pattern.

One obvious explanation for these differences is that those subjects in constant need of current information display high frequency issue patterns and those with a proportionally similar need for retrospective information are characterised by low frequency issue patterns. Table 44 appears to support this view, at least intuitively. It should be borne in mind however, that there are other variables, which will be discussed later, that may account in part for the distribution.

From Table 44 it appears that the subjects exhibiting the highest frequencies of serial publication are Architecture, with 55% of all serials appearing monthly or more frequently, Management with 36%, Environmental planning with 31%, and Economics with 32%. All four subjects areas are dependent to a large extent on news and current statistical or legislative data and it is only in frequently appearing serials that this information can be disseminated effectively. In addition all four subjects are largely applied studied areas. Frequently appearing serials often carry more general information than their less frequently published counterparts. This is in fact borne out by the relatively high percentage (6%) of general social science serials appearing weekly. Interestingly, it is also the general social science serial that most reflects the overal social science publishing pattern. The disciplines where currency is of small importance have few serials appearing monthly or more frequently. These subjects appear to adopt an almost monographic pattern. Only 4% of history serials and 1% of anthropology serials appear monthly or more often. Both figures are well below the norm and emphasise the quite considerable differences between social science disciplines and the pitfalls of generalizing about the social sciences.

It may be noted that the disciplines where current information is of importance tend to be those with a strong practical orientation, and also with a sizeable market, including industry. All of these factors would favour high frequency serials. One the other hand, the more'academic' subjects have a smaller and largely academic market, as well as having less need for currency.

A further point of interest is the distribution of values throughout the publication spectrum. It can be seen that in some subject areas each issue pattern is well represented while in others there is a clear preference for only one or two issue patterns. Thus in criminology we have a fairly even spread throughout whilst in philosophy there is a clear leaning towards the quarterly, with 67% of its population favouring this pattern. This may be due to the fact that some subjects have more than one type of audience, but the economics of publishing and the size of the market (which are of course related to the type of audience) are an equally likely explanation.

Table 44 Patterns of Publication (by discipline)

(Figures given are percentages and the base in each case is the number of serials, both alive and dead, in each class)

	Issue Pattern						
Anthropology	25	23	10	34	7	1	-
Archaeology	10	50	15	17	4	2	2
Architecture	-	5	2	15	23	55	-
Criminology	4	37	8	25	14	12	-
Economics	6	30	4	22	6	26	6
Education	5	15	9	39	13	17	2
Environmental planning	6	16	2	33	12	28	3
Geography	9	28	15	28	6	12	2
History	8	24	17	41	6	4	-
Law	2	24	8	37	15	12	2
Librarianship	1	27	4	38	16	12	3
Linguistics	5	11	21	41	11	10	1
Management	7	16	3	28	10	33	3
Philosophy	3	14	6	60	6	6	5
Politics	7	24	3	25	6	24	11
Psychology	6	12	8	46	16	11	1
Social policy	5	39	2	24	8	19	3
Social sciences	7	22	7	28	8	20	8
Sociology	6	22	10	46	6	8	2
Statistics	3	11	4	55	11	16	-

The table shows the percentage of a subject's serials adopting one or other of the issuing patterns.

12.2 Issuing body

The link between a serial's issuing body and its publication pattern is very strong. The strength of this link can be gauged by noting the significant differences between the distributions for each issuing body (Table 45). Each set of values is almost unique, each issuing body being characterised by its own publication pattern. Furthermore, variations in one column to the order of 30% are not uncommon.

Table 45 Patterns of Publication (Relationship of Issuing Body)

(Figures given are rounded percentages and the base in each case is the number of serials, published by each issuing body)

Type of issuing body	Issue pattern							
	1	1	2	3	4	5-8	9-12	13+
Association	4	18	7	6	32	13	18	3
Publisher	1	9	5	4	30	11	29	11
Government	5	43	4	4	15	6	20	3
Educational	11	19	14	9	32	8	6	1
Political	11	25	-	2	16	14	25	7
International	11	23	11	4	24	9	18	1
Business	2	45	3	1	15	6	27	1
Private	-	2	2	2	36	9	38	6
Others	13	34	6	5	21	10	12	1

Bearing in mind that associations account for over one-third of social science serial output (see Figure 15, page 90) it is perhaps not suprising that they, of all issuing bodies, most correspond to the general social science pattern (Table 43).

The high frequency serials are generally favoured by the commercial sector. Forty-two per cent of the serials published by commercial publishers follow monthly or more frequent issue patterns. Their interest can no doubt be explained by the lucrativeness of the high frequency serial, which attracts large audiences and the information, in which news, is at a premium. Also only a commercial publisher is normally in a position to undertake the organisation and distribution of a high frequency serial.

The popularity of newsletters as a medium for personal or political comment is the reason why political and private issuing bodies figure significantly in the high frequency serial column. However when viewed generally their role as producers of current news and information is rather insignificant; they account for only 12% of the total. In contrast, the commercial publishers' 'stake' is rather more than 50%.

The annual publication pattern is common amongst the publications of government bodies (42%) and the business world (44%). For these issuing bodies the yearbook and annual report are convenient vehicles for their statistical data. As much of this information is of limited appeal or of restricted circulation commercial publishers are little involved in this sector of the serial market. They are responsible for only 9% of the total production of annual serials, although these constitute, in titles, the second commonest form of serial publication.

Quarterly publication is usually synonymous with 'journal' publication, and as might be expected the quarterly pattern is the preference of both educational institutions (32%) and associations (32%), the largest producers of journals. The quarterly market is the domain of these two issuing bodies, 63% of all quarterlies being produced by them. In contrast, commercial publishers, while issuing 30% of their serials in a quarterly form account for only 18% of all quarterlies published.

12.3 Serial form

Serials serve a wide variety of purpose. Issue patterns of serials may be at least partly determined by the function they perform. For example, for a current awareness journal to operate effectively, it should be produced at regular and frequent intervals. In consequence news journals, abstracting and indexing services account for a large proportion of the serials published frequently. Likewise, serials handling archival or review type information can appear at relatively long intervals, their apparent slowness not interfering with their performance.

High frequency serials like news and indexing journals are more common in some subjects than in others. Their presence or absence is a reflection of the subject's dependence upon current data, the extent to which information exchange is conducted via the serial form, and its degree of practical orientation. So we have subjects like Economics which is heavily dependent upon current data, Psychology which relies heavily upon the serial form for communication and Social policy which is largely an applied studies area. (Practitioners require a constant stream of news information to keep themselves fully informed.)

12.4 Frequency changes

A look at the frequency patterns of the serial population over a 40 year time period (Table 46) reveals a few interesting points. Firstly, fewer high frequency social science serials are being published, though the decline has been gradual. Since 1930, monthly or more frequent serials have fallen as a proportion of the total population by nearly 6%. The drop has been more than matched by an increase of 9% in the numbers of serials appearing three or four times a year.

Table 46 Patterns of publication (changes since 1930)

(Figures given are rounded percentages and the base in each case is the total number of serials current at each time interval)

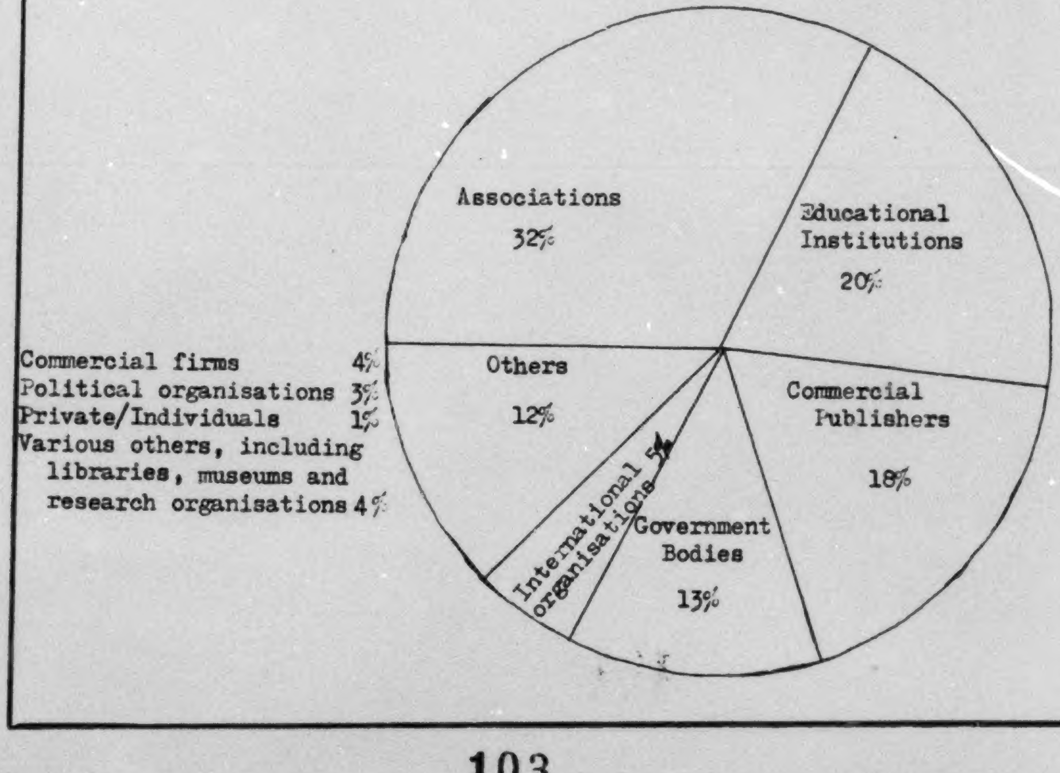
Year	Number of issues per annum					
	1	1-2	3-4	5-8	9-12	12
1930	5	31	25	9	23	6
1940	5	29	27	10	23	6
1950	5	28	29	11	23	6
1955	4	28	30	10	22	5
1960	4	28	32	11	21	5
1965	5	28	33	11	20	4
1970	5	28	34	10	19	4
% change	0	-3	+9	+1	-4	-2

13.0 ISSUING BODY

There is probably no better general indicator of a serial's style, level and content than its issuing body. After all it is the issuing body that sets the tone and prescribes the function of the publication. We recognise this fact when we refer to serials as being 'academic', 'professional' or 'commercial'. In someways these terms are more meaningful than many serial descriptors in current use. Because of this, information on issuing body is of particular use in bibliometric studies. It is useful too in providing guidance in the selection and tracing of serials. Unfortunately, however, issuing body details are not always a feature of bibliographical records; in some cases only editorial information is present.

Social science serial publishing largely the domain of four types of issuing body - associations, the educational institutions, commercial publishers and governments. These four together account for 83% of the total serial output (Figure 15). Membership organisations - societies institutions and associations, play a very important role in sponsoring and promoting social science research and discussion. Over one third of all social science serials are produced by membership organisations. Educational institutions are responsible for just one quarter of the serial production.

Figure 15 Responsibility for issuing serials in the social sciences



In general the social science serial has not proved over-attractive to the commercial publisher. Only 1 in 6 of the serials published is issued by commercial publishing concerns. In a number of cases commercial publishers have been content to publish on behalf of education institutions or membership organisations. This limited involvement is partly a result of the natural reluctance of many publishers to invest in an area of uncertain financial benefit, and partly because many authors prefer to publish in the journal of a society because it carries higher status. More commercial publishers are now becoming involved, however, presumably as a result of the expansion in numbers both of contributors and contributions.

13.1 Issuing body and subject

In grouping together a large number of subjects under the umbrella term social science we are in danger of promoting a false impression of unity and thus masking differences between subjects. A look at the issuing body picture for each subject highlights this danger (Table 47). Each subject is characterised by its own publishing structure; in some areas issuing serials is the province of basically one type of body - associations in Geography (46%), Psychology (46%) and Social policy (45%) - while in others several compete on an almost equal footing, as in Economics and Politics.

As might be expected the involvement of associations is strongest in the applied and professional disciplines. Thus in Librarianship, Psychology, Architecture and Social work associations have more than a 40% involvement. When looking at the relative strength of associations within the disciplines one cannot help but notice the position of Geography. Here involvement of associations is at its greatest. Not being a wholly professional or applied study it is surprising that Geography appears in such a position. This however may be explained by the practice, common in many universities, of publishing geography journals via their own local geographical associations. This increases the relative position of of associations within Geography.

Academic involvement is greatest in the largely 'retrospective' disciplines of Law, History, Philosophy and Anthropology. The position of Law, in which academic institutions produce 50% of the serial output,

TABLE 47

THE RELATIONSHIP BETWEEN SUBJECT AND ISSUING BODY

Subject	Association	Business firm	Educational organisation	Government	International body	Political group	Private	Publisher	Others
Anthropology	28		36	3	2			13	16
Archaeology	41		32	5			2	11	9
Architecture	44	9	2	8		2		33	2
Criminology	27		15	37	2	2		15	2
Economics	26	10	16	19	7	1		16	21
Education	35		23	15	5			16	5
Environmental planning	36	1	15	19	5		2	19	3
Geography	46		33	3	3			13	1
History	36		39	6	2			11	6
Law	19		50	4	2			23	2
Librarianship	41		7	15	3		1	19	14
Linguistics	28		35	4	4			27	2
Management	39	5	17	14	5			20	
Philosophy	26		37		11			18	8
Politics	29		23	12	7	7	2	17	2
Psychology	46		14	4	1			29	5
Social policy	45		6	24	6			10	9
Social science	21		26	21	5		2	19	6
Sociology	31	2	27	14	4			15	5
Statistics	42	4	16	16	4		4	11	2

(Figures given are the percentages of an issuing body's serial output, classified by one of the subject descriptors listed.)

is mildly puzzling given the strength of the legal professions. Closer scrutiny however shows that it is not the profession that publishes most but the Law schools. The other three disciplines - Anthropology, History and Philosophy - we would expect intuitively to have academic leanings; academic subjects by definitions are usually, although not always, the province of academic institutions.

The difference in the social sciences between 'academic' and 'professional' is nowhere more apparent than in the involvement of educational institutions in areas like Librarianship, Social policy and Architecture. In not one of these professional subject areas does the involvement of educational institutions go beyond 10%.

As has been previously mentioned, on the whole, commercial publishers are not very well represented in the Social sciences. This general comment holds true at the subject level, for only in two subject areas, Architecture and Psychology, can the commercial interest be regarded as truly significant. In Architecture 33% of the serials are issued by commercial publishers and in Psychology only 29%. The large readership and the strong demand for current information much a feature of both professions, make them financially attractive and therefore of commercial interest.

The interest of government in the applied sectors of the social sciences shows itself plainly in Table 47. Criminology and Social policy both considered 'problem' areas by local and central government are the main beneficiaries of government sponsorship. 37% of Criminology serials and 24% of Social policy serials are issued by government organisations. Direct government interest in academic disciplines (Philosophy, Anthropology, Archaeology) is slight or non-existent. This does not mean to say that no assistance is afforded as help is often provided indirectly via the funding of research institutes etc.

The relatively large figures in the 'other' category for Economics (21%), Anthropology (16%) and Librarianship (14%) disguise the important roles played by research organisations in the first, museums in the second and libraries in the last.

13.2 Issuing body and serial form

The form of serial output chosen by an issuing body is very much dependent upon the interests these bodies represent. The fact that they all serve very different interests is brought out in their quite dissimilar choices of serial output (Table 48).

TABLE 48

ISSUING BODY AND SERIAL FORM

Serial form	Type of issuing body[1] Association	Publisher	Government	Educational	Political	International	Business	Private	Other
Journals	74	85	41	79	58	58	43	83	56
Secondary services	5	3	4	4		9	2	3	9
Statistics	1	1	20	1	1	7	12	9	1
Yearbooks	3	7	2	2	9	3	7	2	
Reports	10	1	29	3	19	10	33	2	23
Proceedings	5		1	2	9	12	1		2
Series	1	2	2	8					9
Others	1	1	1	1	4	1	2	1	
	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)

[1] Rounded percentages, based upon the number of serials belonging to each type of issuing body.

Journals are thus very much a feature of associations, which produce by far the largest number of them - 1113. The journal is also the mainstay of the serial publishing programmes of educational institutions (79%) and commercial publishers (85%), but not of government bodies, only 40% of their serial output being in the form of journals; this largely fits in with what is felt to be the role of the government - a provider of primary material rather than analysis or comment.

Associations provide a greater range of publications generally, producing large numbers of journals, secondary services, yearbooks, reports and proceedings. Commercial publishers on the other hand tend to specialise in journals and yearbooks.

The effort of publishing secondary services - abstracting journals, indexing journals, bibliographies, etc. - falls evenly across the board, although numerically associations produce the greatest number (70). The important role that libraries play, particularly in producing bibliographies, largely explains the relatively high figure of 8% in the 'others' column. (Libraries were not one of the chosen issuing body categories). It would appear from the high figure for international organisations (8%) that a good proportion of their publishing effort goes towards the organisation of the literature, the international control of the literature has for some years been a matter of concern to such organisations.

Government bodies and business firms between them account for a large proportion (70%) of the statistical bulletins and reports produced within the social sciences. International bodies also issue statistical bulletins, 7% of the titles they publish fall within this category.

Nearly a third of the serials published by both government bodies and business firms are reports, usually annual. Associations are also significant producers, 10% of their serial output appearing in this serial form, and in quantitative terms (149) they are second only to government bodies (172).

Monographic series publishing is by and large the province of educational bodies, which account for 61% of the total monographic series production.

13.3 Issuing body and serial content

This analysis is of course very limited, as it shows only that certain serials contain certain types of content, not how much of each type they contain. A serial issued by an association may contain news, but this may represent only 1% of its content, compared with 20% of a serial published by an association. An analysis of the proportions of each serial devoted to each type of content would probably show a very different picture, with larger differences between different issuing bodies.

It has been previously stated that issuing body is a good indicator of serial form; it is also a good indicator of serial content. There is the 'academic' stereotype with lengthy discursive articles and book reviews, the 'commercial' stereotype with its magazine format and the 'professional' stereotype displaying a whole range of news features. Looking at the relationship between issuing body and the content of serials (Table 34) it is evident that these generalisations contain an element of truth. News articles figure prominently in the serials of both associations (38%) and commercial publishers (38%). While the figures are identical the subject of the news differs. The news found in the publications of associations is primarily that concerned with the profession - news of meetings and personnel, whereas the news found in commercial serials tends to be topical and is more an indication of style than content.

The article is the major vehicle of information dissemination for all types of institution, although it is most popular with educational institutions, 87% of whose serials contain articles.

Table 49 indicates the number of different types of content found in the serials of each issuing body. It is apparent from the table that associations provide the greatest number. 18% of the serials issued by membership bodies feature four or more different kinds of content.

Table 49 Issuing body and the number of features contained in a serial

No. of features	Type of Issuing Body Association No. of serials	%	Publisher No. of serials	%	Government No. of serials	%	Educational organisation No. of serials	%
1	444	(30)	260	(32)	278	(47)	284	(31)
2	400	(27)	233	(29)	181	(31)	267	(29)
3	377	(25)	226	(25)	91	(15)	264	(27)
4	187	(13)	70	(9)	31	(5)	76	(8)
5	48	(3)	11	(2)	6	(1)	22	(2)
6	29	(2)	12	(2)	4	(1)	9	(1)

The percentages are taken of the total no. of serials of each issuing body

14.0 SUBJECT CHARACTERISTICS AND RELATIONSHIPS

The examination of the social science serial population on a subject basis is one of the most rewarding and also the most difficult of the approaches possible with the CLOSSS data. It is difficult to get away from some kind of subject categorisation; people refer to themselves as belonging to a subject, subject labels figure significantly in serial titles, degrees are awarded in them and university departments are named after them. As subject labels are so much a part of the fabric of life they offer many avenues for fruitful research. Unfortunately however there are several dangers in their use. People's conception of what a subject is varies in time and place and according to discipline and thus it is difficult to arrive at any form of meaningful consensus.

Bearing in mind the last comment it is as well to summarize quickly the method of subject classification. Serials were examined internally and up to five descriptors were allocated from the subject guide (Table 1) to describe the contents. Initially specific descriptors were used but because of variations in interpretation more general terms were adopted at a later stage. These terms were mostly discipline labels and all subject discussions will be based on the analysis of the file at this level.

As classification was not based upon title a number of serials from the Humanities and Sciences, at least apparently so, were included in the file. This enabled us to explore the boundaries of the Social sciences in a manner not possible if analysis had stopped short, at the title level. As more than one descriptor was allowed in the classification of a serial it meant that relationships between Social science disciplines could be explored, albeit in an elementary manner.

14.1 Size of the serial literature

Disciplines or subjects do not constitute a standard unit of size. The fact that a certain area of knowledge is given a label and known as a subject subject or discipline is only weakly related to the 'size' of the area, whether this is measured in terms of publications or in other ways. In any case, the concept of subject is a vague one: 'Economics' is a subject but so are subsections of it such as Economic theory or Welfare economics.

'Political history' is a 'subject' - but so is 'History', which embraces it, or 'French political history' or 'Electoral history', both of which are embraced by it. The following tables must be read in this light.

Table 50 provides details on the numbers of serials published. Column 1 shows the number of serials exclusive to that subject and the final column the total number of serials containing information on or about that subject. This table is similar to Table 23 but gives extra information; it is inserted here because the text refers closely to it.

Economics accounts for by far the largest number of serials. 29% of the serial population contains economic information of some kind. Three factors can be identified which contribute significantly to the ranking of Economics. Firstly economic problems occur in all disciplines, secondly economic data requires regular and rapid dissemination and the serial form is eminently suitable for this, and lastly, Economics is an extremely large discipline with many of its sub-classes being almost disciplines in themselves (Accountancy, Transport economics). The considerable growth in economic interest and concern has also had its effect.

Much the same can be said of Politics although to a lesser degree. In many ways the similarities between these disciplines do not stop here; both may be regarded as 'classic' social science disciplines and both have a large area of subject matter in common.

At the foot of Table 50 lie three kinds of subject, those that are less dependent upon serial information, those that do not truly belong to the social sciences but were included because of their inter-disciplinary character, and those that are too small to support large numbers of serials. Anthropology and History belong to the first category, Archaeology, Architecture, Ergonomics and Philosophy belong to the second and Futurology and Criminology to the third.

The number of general serials in the population is interesting. There are 402 of them representing about one twelfth of all the titles on the file. Interpretation of this fact must be very cautious. A'multi-disciplinary' serial may be one spanning several fields, or may reflect the beginning of a new and quite specific field. 'Subjects' are constantly regrouping themselves into different contents and sizes. To examine this phenomenon through the serial literature would be a most interesting exercise but was

TABLE 50

SUBJECT COMPOSITION OF THE FILE

Subject	Number of serials wholly that subject	%	Number of serials devoted to two or more subject areas	%	Total	%
Economics	1047	(22)	323	(7)	1370	(29)
Politics	545	(11)	257	(5)	802	(17)
Education	345	(7)	130	(3)	475	(10)
Social science	325	(7)	77	(2)	402	(8)
Social policy	213	(4)	102	(2)	315	(7)
Sociology	141	(3)	141	(3)	282	(6)
Psychology	212	(4)	61	(1)	273	(6)
Linguistics	171	(4)	4	(2)	265	(6)
Geography	157	(3)	57	(1)	214	(4)
Law	148	(3)	56	(1)	204	(4)
Environmental planning	83	(2)	82	(2)	165	(3)
Management	97	(2)	60	(1)	157	(3)
Anthropology	93	(2)	54	(1)	147	(3)
History	71	(1)	60	(1)	131	(3)
Librarianship	79	(2)	12	-	91	(2)
Statistics	34	(1)	24	-	58	(1)
Architecture	16	-	38	(1)	54	(1)
Criminology	38	(1)	14	-	52	(1)
Archaeology	25	(1)	23	-	48	(1)
Philosophy	18	-	17	-	35	(1)
Ergonomics	7	-	10	-	17	-
Futurology	5	-	1	-	6	-

(The base for the calculations of each percentage is the total number of serials with subject coding (4761)).

%s of less than 1 are not shown

of course far beyond the scope of the present study. The comments that follow assume a starting point of a traditional subject breakdown - no other starting point was possible.

14.2 The multi-disciplinary character of social science serials

In an area such as the Social sciences, with uncertain, shifting subject boundaries in which cross-disciplinary and interdisciplinary studies proliferate, it is perhaps not unexpected that many serials cover more than one subject. 36% of the social science serials are what might loosely be called 'multidisciplinary'.

Table 51 The Multisubject character of social sciences serials

Subject	Number of interdisciplinary serials	% of all subject serials
Anthropolgy	54	37
Archaeology	23	48
Architecture	38	70
Criminology	14	27
Economics	323	24
Education	130	27
Environmental planning	82	50
Geography	57	27
History	60	46
Law	56	27
Librarianship	12	13
Linguistics	94	35
Management	60	38
Philosophy	17	49
Politics	257	32
Psychology	61	22
Social policy	102	32
Social science	77	19
Statistics	24	41

Variations between subjects are considerable (see Table 51). The non-social science subjects included because of their interdisciplinary character, appear, as might be expected, among the subjects with the highest number of multi-subject serials. 70% of the architecture serials, 49% of the philosophy serials, and 48% of the archaeology serials cover more than one subject. Of the truly social science subjects Sociology and Planning contain most multi-subject serials. 50% of the serials in Sociology and 50% of the serials in planning cover more than one subject. The interesting difference between these two subjects is that while Sociology shares serials with other Social science disciplines, planning serials reach outside the social sciences to Architecture for their relationships.

At the other end of the scale we have the self-contained and self-sufficient subjects, Librarianship, Criminology and Education, with respectively 13%, 27% and 27% of their serials being multidisciplinary.

Education, however, is a special case, and not too much weight should be lent to the above figures. The strong link between Education and Psychology is missing from these figures as all educational psychology serials were classified directly under Psychology. If we extract these figures we get a different picture, with 33% of educational serials being multidisciplinary. Similarly the multidisciplinary character of psychology serials falls from 22% to 20%.

It is interesting to note that these three 'watertight' subjects are also conceivably the most interdisciplinary. All three owe their origin to several disciplines with which they may have lost contact. Possibly this contact is more evident in citations than in serials' content.

Table 52 looks more closely at the multi-subject coverage of social science serials. The table establishes exactly what is related to what, and also provides an indication of the strength of the relationship. For each subject area two numbers are given; one represents the number of times a subject is found in association with another, and the other expresses this figure as a percentage of the total number of times that subject is associated with all other subjects.

Each relationship has two sides to it; for instance, although there are just 4 associations between Law and Criminology, this figure

TABLE 52

Subject Relationships Within
Serials : Frequency of Association

SUBJECTS	Anthropology	Archaeology	Architecture	Criminology	Economics	Education	Environmental planning	Geography	History	Law	Librarianship	Linguistics	Management	Philosophy	Politics	Psychology	Social policy	Social science	Sociology	Statistics
Anthropology		16 (57%)			2 (1%)		1 (1%)	8 (16%)	3 (4%)			3 (3%)		2 (1%)	2 (1%)	3 (5%)		2 (2%)	20 (12%)	
Archaeology	16 (2.7%)							2 (4%)	8 (12%)			2 (2%)				1 (2%)				
Architecture					4 (1%)		33 (39%)						1 (1%)			1 (2%)	1 (1%)			
Criminology										4 (7%)					2 (1%)	1 (2%)	4 (4%)		3 (2%)	
Economics	2 (3%)		4 (10%)			9 (6%)	22 (26%)	12 (24%)	7 (10%)	22 (37%)	1 (7%)		46 (64%)	1 (5%)	109 (43%)	1 (2%)	14 (14%)	13 (15%)	39 (24%)	13 (52%)
Education					9 (3%)			1 (2%)	1 (1%)	1 (2%)	5 (37%)	77 (79%)	4 (6%)	1 (5%)	8 (3%)	5 (8%)	15 (15%)	4 (5%)	8 (5%)	
Environmental planning	1 (1%)		33 (81%)		22 (7%)			10 (20%)	2 (3%)	1 (2%)			2 (3%)		7 (3%)	1 (2%)	2 (2%)		6 (4%)	
Geography	8 (13%)	2 (7%)			12 (4%)	1 (1%)	10 (11%)		5 (7%)					1 (5%)	4 (2%)		1 (1%)	5 (6%)	1 (1%)	1 (1%)
History	3 (5%)	8 (29%)			7 (2%)	1 (1%)	2 (2%)	5 (10%)			3 (21%)	2 (2%)		2 (10%)	20 (8%)			8 (9%)	6 (4%)	
Law				4 (29%)	22 (7%)	1 (1%)	1 (1%)		1 (1%)				1 (1%)		25 (10%)	1 (2%)	1 (1%)	1 (1%)	1 (1%)	
Librarianship					1	5 (4%)			3 (4%)				1 (1%)	2 (10%)	2 (1%)			2 (2%)		
Linguistics	3 (5%)	2 (7%)				77 (55%)			2 (3%)						3 (1%)	2 (3%)	1 (1%)	5 (6%)		1 (4%)
Management			1 (3%)		46 (15%)	4 (3%)	2 (2%)			1 (2%)	1 (7%)				7 (3%)	2 (3%)	2 (2%)		4 (2%)	
Philosophy	1 (1%)				1	1 (1%)		1 (2%)	2 (3%)			2 (2%)			5 (4%)	4 (6%)		2 (2%)	1 (1%)	
Politics	2 (3%)			2 (14%)	109 (35%)	8 (9%)	7 (8%)	4 (8%)	20 (24%)	25 (43%)	2 (14%)	3 (3%)	7 (10%)	5 (25%)			14 (14%)	23 (27%)	24 (15%)	1 (4%)
Psychology	3 (5%)		1 (3%)	1 (7%)	1	5 (4%)	1 (1%)			1 (2%)		2 (2%)	2 (3%)	4 (20%)			20 (20%)	7 (8%)	12 (7%)	2 (8%)
Social policy			1 (3%)	4 (29%)	14 (5%)	15 (11%)	2 (2%)	1 (2%)		1 (2%)	2 (14%)	1 (1%)	2 (3%)		14 (9%)	20 (32%)		1 (1%)	23 (14%)	
Social science	2 (3%)				13 (4%)	4 (3%)		5 (10%)	8 (12%)	1 (2%)		5 (5%)		2 (10%)	23 (8%)	7 (11%)	1 (1%)	1 (1%)	11 (6%)	2 (8%)
Sociology	20 (34%)			3 (21%)	39 (12%)	8 (5%)	6 (7%)	1 (2%)	6 (9%)	1 (2%)			4 (6%)	1 (5%)	24 (9%)	12 (19%)	23 (24%)	11 (13%)		4 (16%)
Statistics					13 (4%)			1 (2%)				1 (1%)			1	2 (3%)		2 (2%)	4 (2%)	

The top figure in each cell refers to the number of times the subject is found in association with another, in a serial.

The bottom figure in each cell expresses this figure as a percentage of the total number of times that subject is associated with all other subjects.

represents 29% of the total number of criminology associations, but only 7% of the law associations.

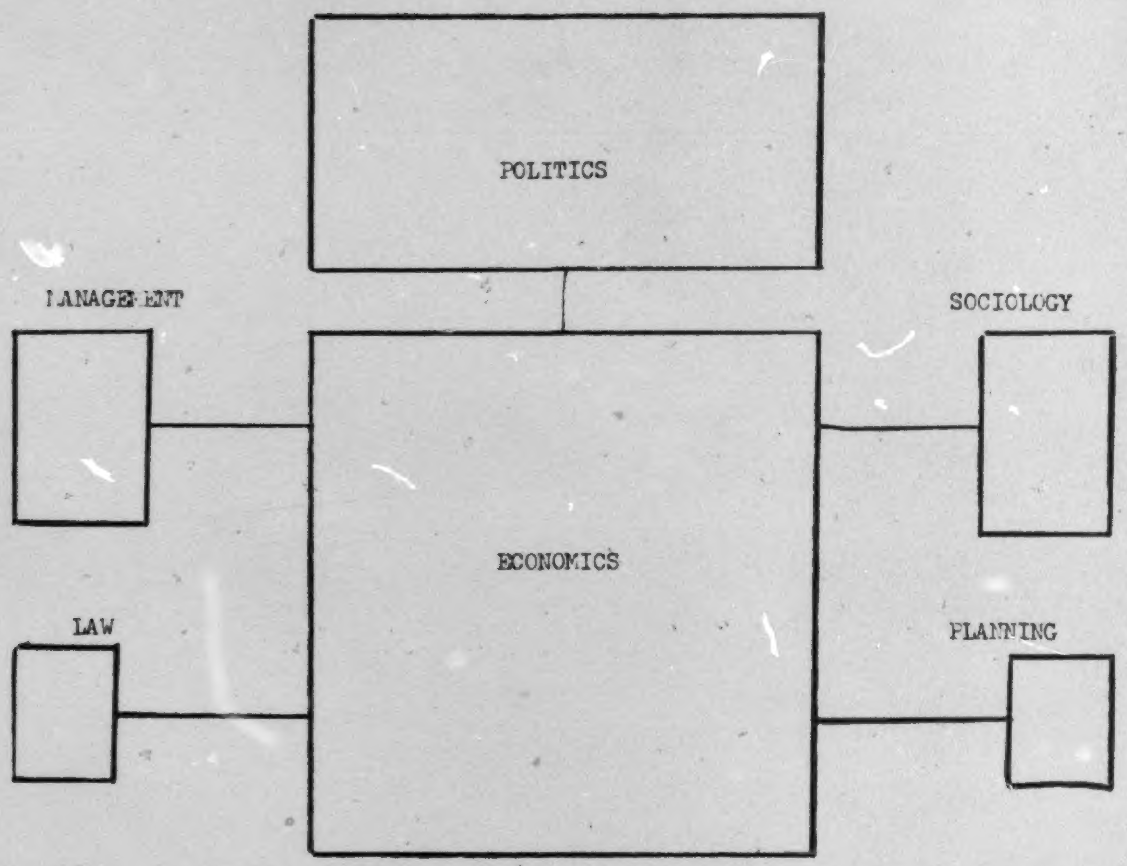
The multi-subject serials of Economics and Politics bring together the greatest range of subjects. Via the serials, both subjects are coupled with all but three of the subject areas represented on the file. In general, a subject's multi-subject serials form a large number of different subject relationships, the average for the file being approximately 8. This fact emphasises the folly of erecting rigid boundaries around social science subject areas.

As might be expected, the serials of the disciplines whose roots lie, wholly or partly, in the humanities (archaeology, philosophy and architecture), form the least number of relationships. In the cases of archaeology and architecture, less than 6 relationships are formed, and only one relationship is, in terms of frequency of association, really important.

In strict numerical terms, the subjects that are 'closest' together (i.e. those forming the highest number of associations) are politics and economics. These subjects are found associated in serial titles 109 times. It should be remembered however that these two subjects are also the two largest disciplines in terms of serial numbers. To obtain a relative picture we need to express these figures as a percentage of the total number of associations made by that subject. Viewed in this manner, the closest relationship between subjects are those between architecture and planning (81% association), linguistics and education (79% association), and management and economics (66% association). As has been mentioned, the converse is not necessarily true; in the relationship of management to economics, the association is only in the region of 15%. Here we have a situation where economics is only partly related to economics. Figure 16 explores a little further the relationship of other social science disciplines to economics.

FIGURE 16

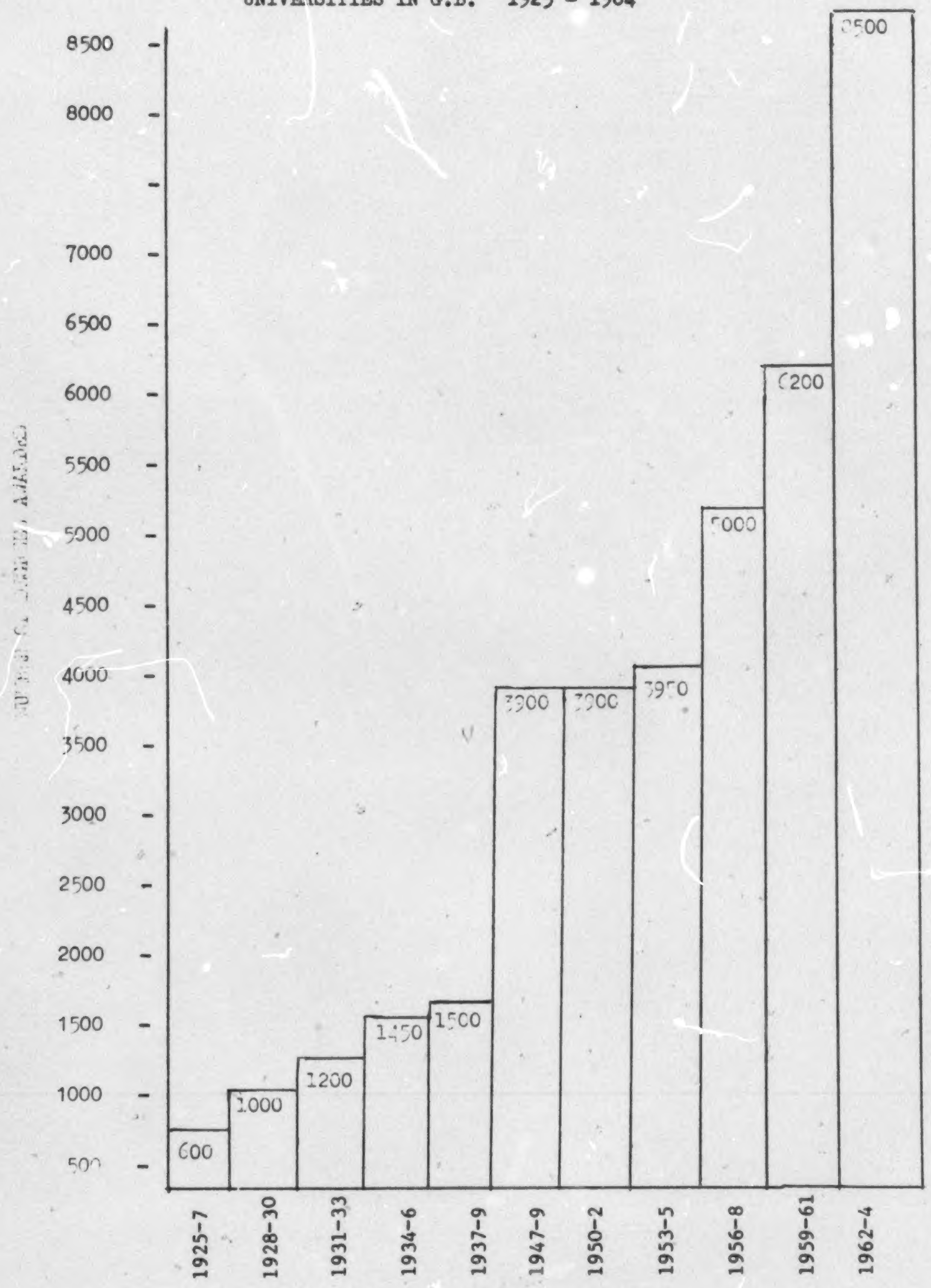
The multi-subject serials of
Economics and the relationships
they form


POLITICS
MANAGEMENT
SOCIOLOGY
ECONOMICS
LAW
PLANNING

SIZE AND DISTANCE INDICATE THE STRENGTH OF THE RELATIONSHIP

FIGURE 17

: SOCIAL SCIENCE FIRST DEGRESS (HONOURS) OBTAINED AT UNIVERSITIES IN G.B. 1925 - 1964



14.3 Growth of the social science serial population

The social sciences have really come into their own as a related group of disciplines only in the twentieth century, and their greatest growth has been since the Second World War. Figure 17 demonstrates one manifestation of this growth by tracing the number of first degrees awarded in the social sciences since 1925. It can be seen that the rapid rise in numbers of degrees awarded is a phenomenon of recent years. It is partly because of this rapid and very recent growth and partly because of the relative infancy and the birth of new areas within the social sciences that they are so unstable, and as a result, so difficult to define.

By monitoring the literary products of the various social science disciplines we may obtain some insights into the nature and the directions of growth. However, such an index, by itself, is of little use; it is only one of many indices that monitor the complex process of growth and only when used in conjunction with the others is its value realised.

Serials, becuase they are a relatively speedy form of publication, can be rewarding to study. Since they are used so commonly as main vehicles of primary communications, serials reflect changes in the size and constitution of a subject area. Title counts have been one of the most commonly used measures to assess growth. Unfortunately, although title counts provide valuable bibliographical information, their bibliometric value has been overstated, and often, misinterpreted. Title counts can provide only very approximate measures of growth and size given the differences in size and content that exist between serials. Title information is probably a better guide to the organisation of a subject or to the amount of research being done in that.subject than its growth. If title information is used in conjunction with the other measures of size (pages, physical dimensions, articles,) more accurate statistics of literature size can be obtained.

The following discussion on the growth in the number of serial titles published provides no more than a rough indication of the growth of the literature, and thus a (rather rougher) indication of the growth of the subject. Table 53 shows that since 1880 the social sciences have undergone an apparent two stage growth process; the Second World War marking the end of the first and the beginning of the second. The first stage, spanning 60 years from 1880 until 1940, is one in which although serial numbers increased rapidly - many subjects doubling their numbers in the

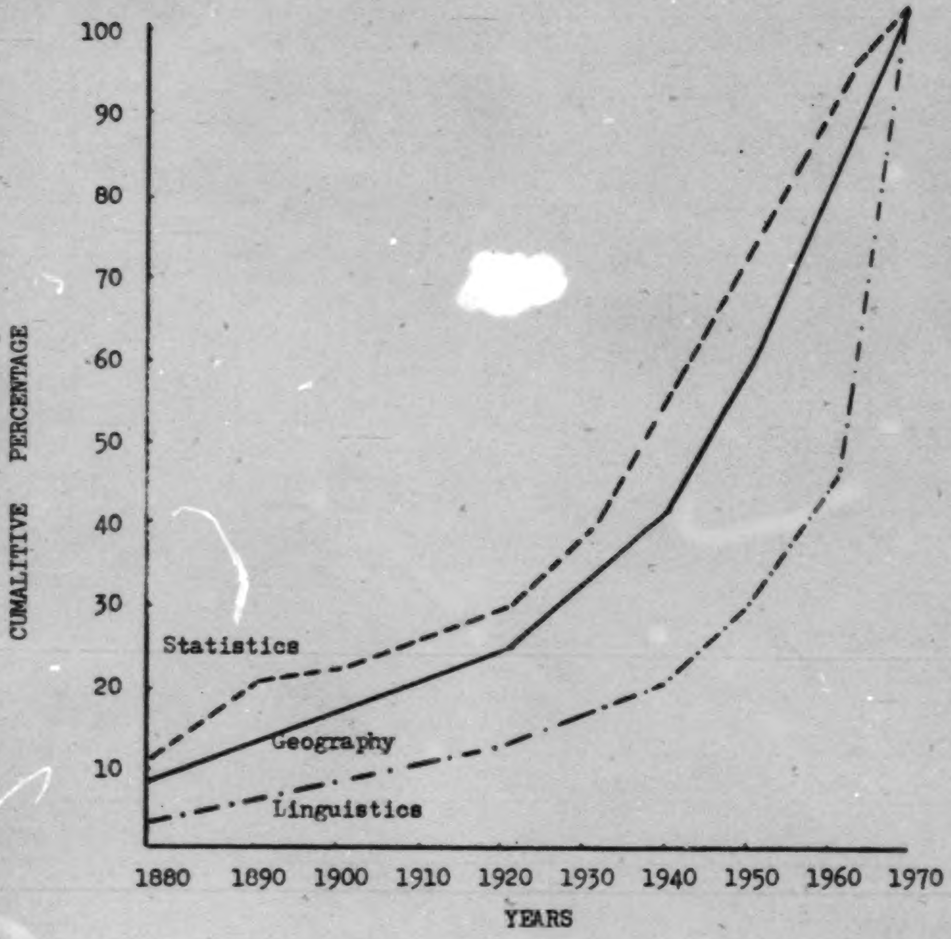
TABLE 53

Subject Growth & Serial Numbers

Each figure expresses the size of
the serial population as a percentage
of the figure for 1970

SUBJECT	YEAR											
	1870	1880	1900	1910	1920	1930	1940	1950	1955	1960	1965	1970
Anthropology	5	7	10	13	17	24	33	43	53	67	88	100
Archaeology	10	15	15	17	20	27	32	54	63	73	90	100
Architecture	0	4	11	18	24	33	40	58	64	73	87	100
Criminology	8	13	13	18	20	28	35	53	60	78	98	100
Economics	5	8	12	17	23	32	41	60	66	74	86	100
Education	2	3	4	9	15	21	25	37	45	54	76	100
Geography	9	12	16	20	25	34	44	62	73	83	92	100
History	1	3	8	10	22	38	51	[illegible]	81	93	99	100
Law	6	11	14	20	28	37	46	59	69	80	87	100
Librarianship	6	7	13	20	28	33	43	57	53	72	86	100
Linguistics	4	5	6	8	11	16	20	30	36	48	73	100
Management	1	1	3	3	7	23	31	46	55	68	88	100
Planning	2	2	5	11	16	23	29	40	45	54	72	100
Politics	5	9	12	17	21	30	43	55	62	73	84	100
Psychology	3	5	7	13	19	30	41	56	64	77	92	100
Social Policy	6	10	15	21	28	38	48	65	72	79	88	100
Social Science	7	7	10	13	19	26	35	54	66	71	88	100
Sociology	5	5	8	9	13	21	30	44	54	67	82	100
Statistics	11	19	22	24	29	33	56	76	82	93	96	100
All	5	7	10	15	20	29	38	53	60	70	85	100

Figure 18 GROWTH RATES : A COMPARISON



PERCENTAGES ARE CALCULATED ON THE 1970 SERIAL POPULATIONS FOR EACH SUBJECT ten year time period - the actual size of the serial population remained relatively small. In fact by the year 1940 the social science serial population was only just over a third of what it is today. After 1940 however the serial population began to increase much more rapidly. In a much shorter period - 30 years - the size of the population has swelled to nearly three times the size it was in 1940.

Variations between subject growth rates provide much material for speculation. If we take the date that each subject group reached half its 1970 size, we find 3 classes of subject: those that conform to the overall median of thirty years, those that attained their median age before this, and those that attained it after. Thus we have two subjects, history and statistics, that achieved "maturity" relatively early, and three subjects, education, sociology, and linguistics, that have matured - that is, reached the median age - only recently. These last 3 subjects are the current growth leaders in the social sciences. The 'mature' subject areas are obviously slowing down considerably in their growth rates. Compare, for instance, the growth of a relatively mature area like history (1% overall in the last 5 years) with the staggering growth of linguistics (27% overall in the same period). Figure 18 illustrates the difference between the growth patterns of the 'mature' and 'immature' subject areas.

We are, however, describing relative growth, and Figure 18 does not take account of the fact that actual increases may be similar. (For example, 10 added to 10 is a 100% increase; but added to 100 is a 10% increase; in one sense it is the same rate of growth).

As one might expect, what are commonly considered 'established' subject areas - archaeology, geography, history, psychology and statistics - are indeed so; all these areas appear to be undergoing, in serial terms that is, a period of consolidation rather than growth.

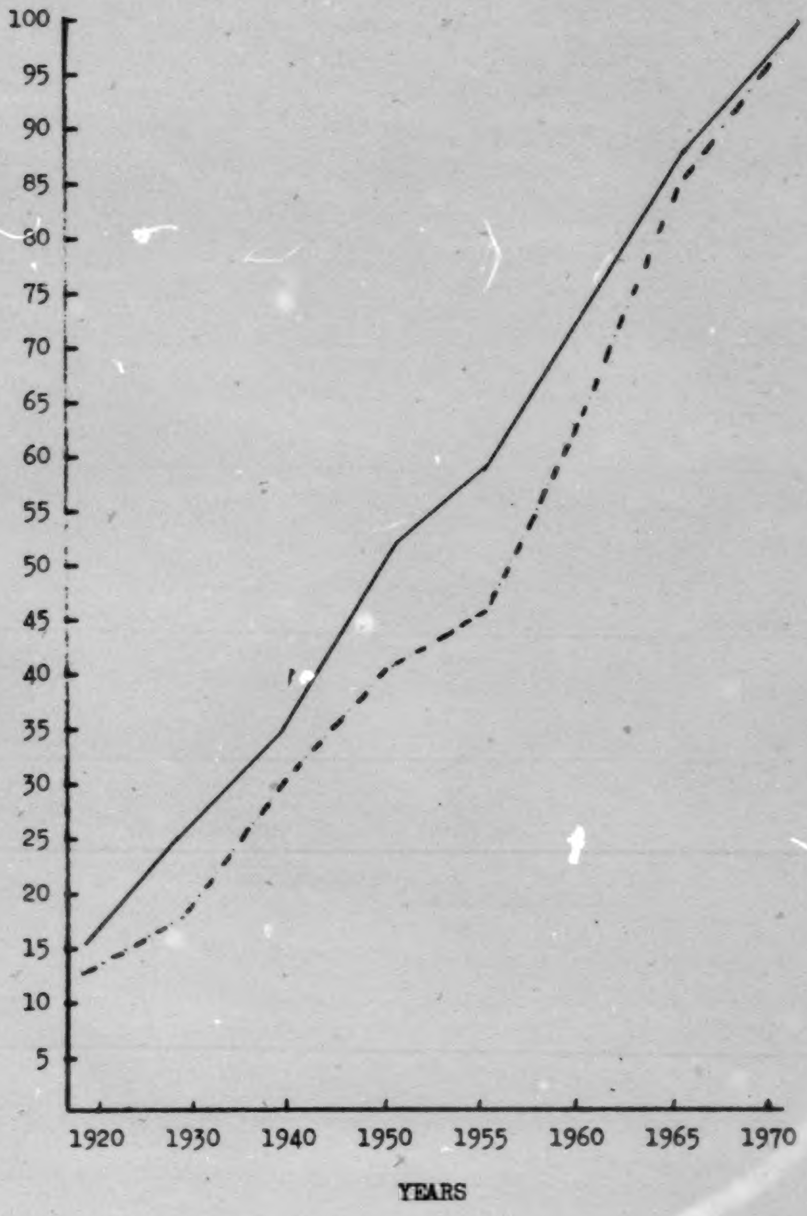
14.4 Growth in numbers of pages produced

As has previously been mentioned, title counts are particularly meaningful when used in conjunction with page counts. Figure 19 provides a comparison with data derived from both title counts alone, and that obtained by taking into account both page size and title numbers. Psychology has been used as an example. What is immediately noticeable is that the growth rates obtained by the two methods are different. Title counts show psychology growing at a fairly consistent rate of about 12% between 10 year sample time periods. When taken in conjunction with page size, however two distinct growth processes appear - a very gradual one of about 7% until 1955 and a faster one of about 20% after 1955. It is clear that we are either studying something quite different, or that title counts alone do not provide us with very accurate growth and size figures.

Figure 19

A comparison between the growth rates of serial numbers and pages : psychology

Figures given are percentages. Percentages are based upon the 1970 figures for numbers of psychology serials on the file (unbroken line) and the 1970 total for number of pages in psychology serials (broken line)



15 LINGUISTICS: A CASE STUDY

"Linguistics" says Lévi-Strauss, "occupies a special place among the social sciences, to whose ranks it unquestionably belongs. It is not merely a social science like the others, but rather, the one in which by far the greatest progress has been made".[1] This view is hardly one that would have been heard say, twenty years ago, nor for that matter, is it one that many would subscribe to even today. With the use of bibliometric methods we are able, if not to resolve the argument, at least to see whether there is any evidence in the literature to support it.

Linguistic serials bulk relatively large in the file considering the size of the discipline. Linguistics ranks eighth in terms of numbers of serials, ahead of some larger disciplines (larger that is in terms of numbers studying the subject), notably geography and law. One out of every 18 serials published in the social sciences belongs to the class linguistics. The serial form is obviously suited to the needs of the subject - a sure sign of a discipline with a high turnover of ideas, or indeed, of a discipline in which much research is being conducted. Unquestionably linguistics is a subject on the move. Using as an indicator the number of serials published at various time intervals (Table 53) we note two features lead to this conclusion.

Firstly, as a proportion of the social science serial population, linguistic serials have grown significantly since 1880. Then they represented only 4% of the serial population, while today that figure is 6%; this increase has come at a time when most other social science disciplines are also growing considerably. Secondly, linguistics is the current social science growth leader. During the period 1965-70 the subject experienced a staggering overall growth rate of 27%. Further, rapid growth has been a feature only of recent years; prior to 1955 the subject registered an annual growth rate of somewhat under 1%. This was at a time when many social science disciplines were in the process of doubling their numbers of serials. The beginnings of rapid growth appear to coincide with the spread of the structuralist doctrines, and the realisation that linguistics had much to offer, especially in regard to methodology, to other disciplines.

Figure 20 traces the growth of linguistics during the twentieth century. To provide a more realistic view of growth, and to put it in context, the page length of the journal *Language* has also been noted, over

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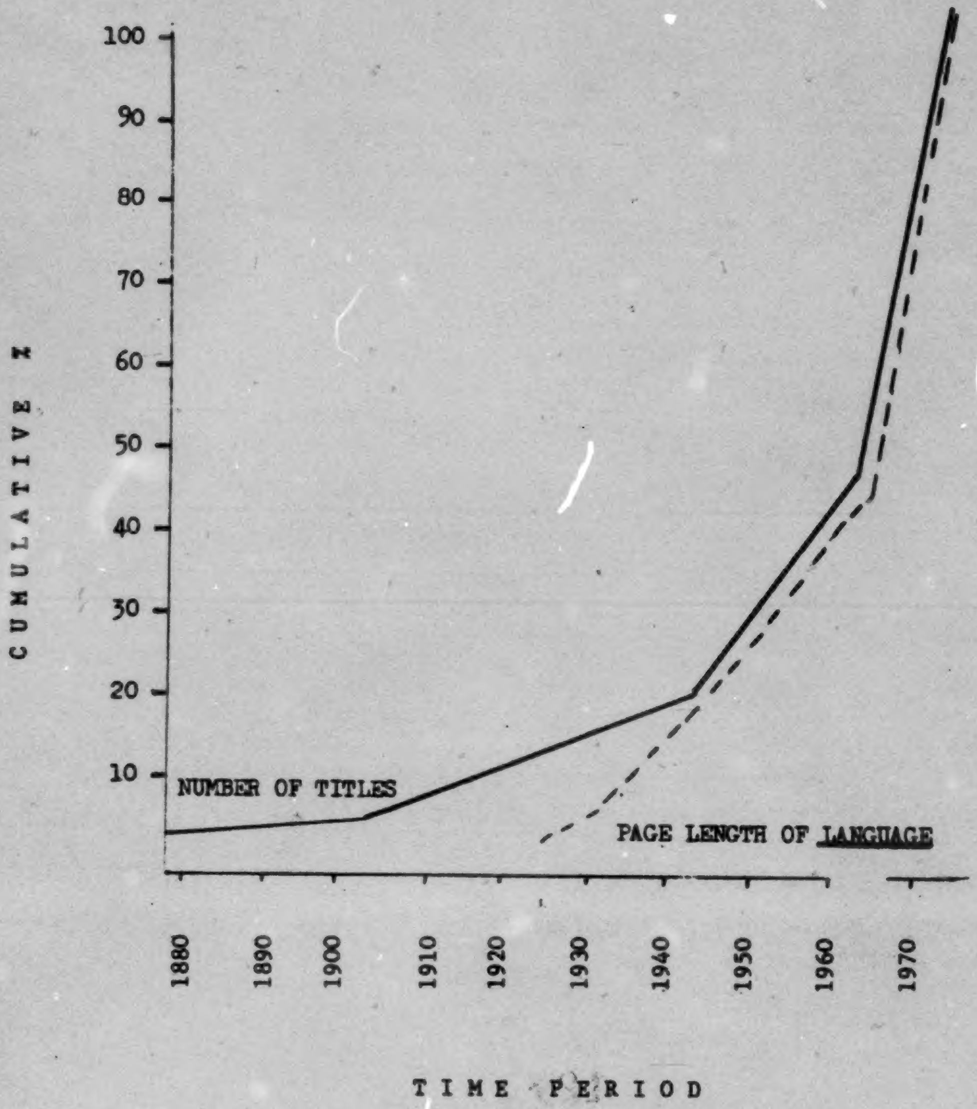
[1] Lévi-Strauss, C *Structural Anthropology*. Basic Books, London 1963,

FIGURE 20

Linguistics : Growth trends of the Serial population (as demonstrated by number of titles issued and the number of pages published by the journal 'Language').



the same time period. The addition of the page length data further emphasises the rapid growth of the subject.

The growth of linguistics is as startling for its magnitude as it is for its direction. Growth has not been completely self-contained; it has often manifested itself in the form of overspills onto other disciplines. 35% of all linguistics serials carry information that may be classed as other than linguistics. Figure 21 shows which disciplines attract the most attention from linguistics. The strength of the relationship is represented diagrammatically. Education is by far the 'closest' discipline to linguistics, as these two subjects are paired on no less than 77 occasions, accounting for 79% of all linguistic subject associations. This does not necessarily mean that there is a close relationship between education and linguistics; but it probably illustrates that there is a lot of information on language teaching, a different matter.

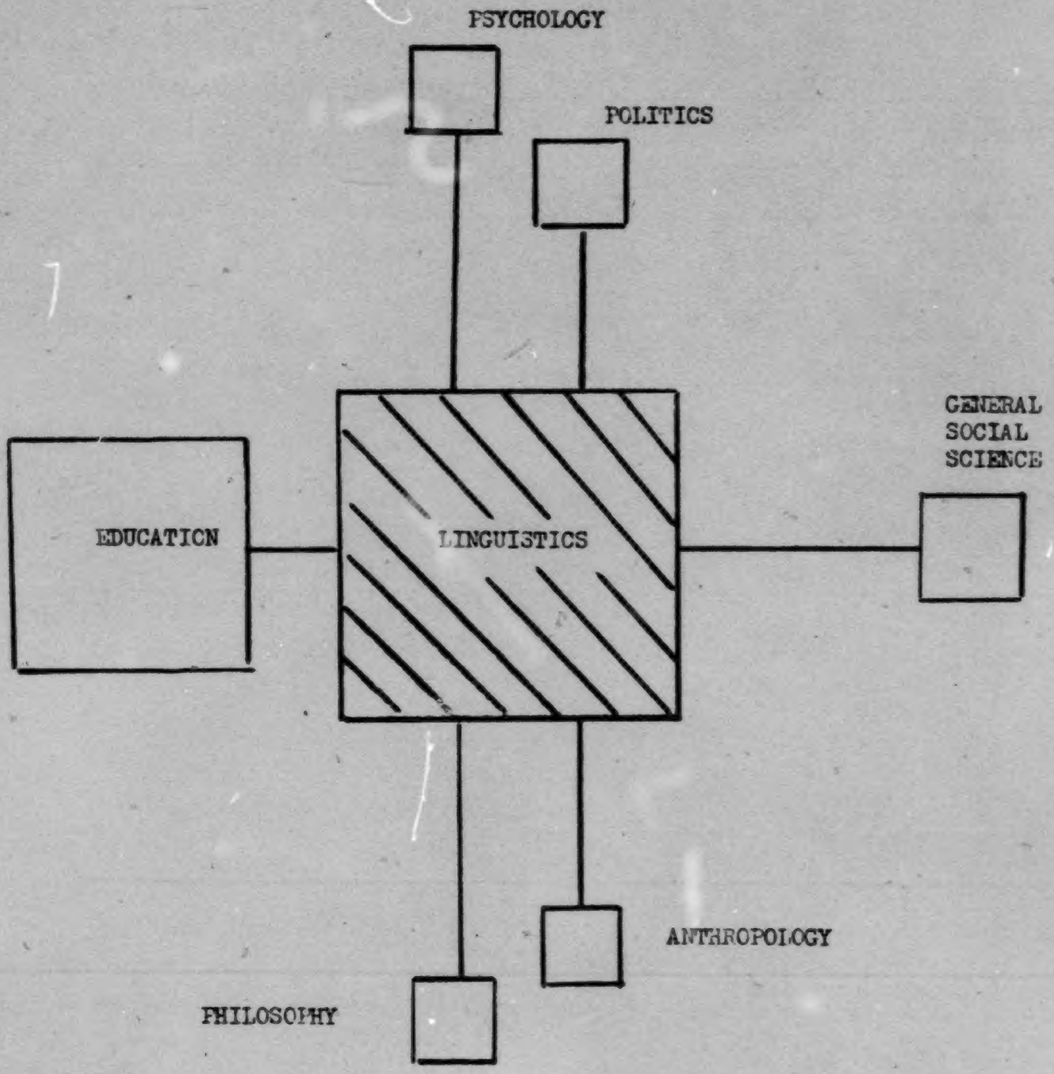
The interdisciplinary nature of the subject is further emphasised when the number of subjects with which it forms relationships is considered. Ten subject areas (Figure 21) have something in common with linguistics. It is probably true to say that the interdisciplinary character of linguistics, as we see it today, is more the result of the interest of other disciplines in linguistics, rather than vice versa. As Lévi-Strauss has pointed out, "a linguistic journal like Word cannot confine itself to the illustration of strictly linguistic theories and points of view; it must also welcome psychologists, sociologists, and anthropologists, eager to learn and understand the theories and methodologies of linguistics"[1]

Linguistics is an area in which two different approaches to the subject, the historical and the experimental, exist. These approaches each demand a particular form of presentation and publication; their needs are quite different. We thus have two distinct publishing patterns in linguistics, the twice-yearly, and the quarterly. The twice-yearly publishing pattern, which 21% of the serials follow, is very much a feature of disciplines in which the historical approach is favoured. In history for instance, 17% of the serials follow the twice-yearly pattern. The quarterly pattern, on the other hand, to which 30% of the linguistic serials belong, is popular with 'scientific' disciplines like psychology, in which 46% of the serials are published quarterly.

[1] Lévi-Strauss, op. cit.

FIGURE 21

Linguistics and its subject relationships (as indicated by coupling subjects in multi-subject serials)


PSYCHOLOGY
POLITICS
GENERAL SOCIAL SCIENCE
EDUCATION
LINGUISTICS
ANTHROPOLOGY
PHILOSOPHY

Size and distance indicate the strength of the relationship

The journal form is the most important and popular method of transmitting serial information. In fact, the journal is more of a feature in linguistics than in any other discipline, and accounts for 92% of the serials published. The subject's serial stereotype is a quarterly journal, a publication suited to carrying current ideas (as opposed to information) and to ensuring continuity of discussion.

The content of a linguistic serial is almost as predictable as its form. The majority of the serials carry between two and three types of feature, which are usually articles, book reviews, and news items. The range is limited in that few features are offered, and, of these that are, articles take up almost all the space available. Review articles are very much the hallmark of a linguistic serial - as many as 41% carry them. This tells us something quite interesting about the subject. The function of a review article is to consolidate, survey and explain progress that has been made during a particular time period. They are found most frequently in subject areas where progress is either very rapid or occuring on a broad front. In these situations it is only the review articles that can keep people in touch with events. The assumption must be made, and we have seen other evidence to support this, that linguistics is such a rapidly progressing subject.

The issuing of linguistic serials is largely the responsibility of three types of organisations - educational institutions, associations, and commercial publishers. These three types of organisations account for 90% of all serial output. The degree of involvement of educational institutions (35%) and associations (28%) is in line with the general picture for 'academic' social science subjects; the difference comes however with the involvement of commercial publishers. They issue 27% of all linguistic serials, a figure well above the social science norm (18%) and one second only to architecture (33%). It is not suprising of course to find commercial investment on this scale given that language is of vital importance in every field of human endeavour and given how much store we set by it. It is also possible that the commercial interest could be a case of jumping on the growth bandwagon - commercial publishers can respond much more quickly than associations and educational institutions.

It has been suggested that linguistics has become more scientific in the last ten years or so and that this has radically changed its publication structure. Certainly the advent of an experimental approach means that more research can be done and written up, whereas history theory and observation are all more limited in the publications they can produce. So if the assumption is correct this would help to explain (a) the growth, (b) the contents and (c) the review articles.

APPENDIX 1

GLOSSARY OF DOCUMENTATION TERMS - SERIALS

ABSTRACT JOURNAL	A printed periodical containing abstracts and complete bibliographic citations of publications, usually appearing in a given subject field or fields.
ACCESSIONS LIST	A printed record, usually serial, of the additions to the stock of a library.
ALMANAC	An annual publication usually containing a calendar, frequently accompanied by astronomical data and general statistical data relating to the year for which it is issued.
ANNALS	A serial publication recording events of a year, transactions of an organisation or progress in a special field.
ANNUAL	A serial which appears once a year, containing material particularly relevant to the year in which it is issued.
ANNUAL REPORT	An annual publication containing a brief account of the activities of an organisation during that year, much of the data often presented in a statistical form.
BIBLIOGRAPHY	A printed list, often a serial publication, that lists publications related to a subject, period, author or some other unifying concept, containing normaldescriptions of these publications.
BOOK REVIEW LIST	A serial publication which consists of critical, occasionally descriptive, appraisals of monographs, usually current and related to a subject field.
BULLETIN	A publication, usually serial, containing 'official' or 'authoritative' topical information.
CALENDAR	A publication, usually serial, giving details of events or discussions in the order in which they are to take place. Usually much of the information is given in a statistical or tabular form.
CATALOGUE	A publication, sometimes serial, giving formal details of a list of documents, arranged according to some definitive plan. It records and describes the resources or a collection, library or group of libraries.

CITATIONS INDEX	An index, usually serial, of published documents in which each document citation is listed under the name of the author of each of the earlier documents cited in the bibliography appended to the later paper being indexed. Such an index usually gives the rest of the document citation after each author's name and may be accompanied by various types of cross reference index prepared from the same material.
CONTENTS LIST BULLETIN	A periodical publication consisting of copies of the contents lists of selected periodicals, usually for a specific subject area.
CONTINUATION	A work designed to continue or supplement another, and having a formal relationship with the original, e.g. common authorship, common title or subtitle, or expressed intention to continue or supplement it.
DIGEST	A publication, sometimes serial, consisting of summaries of information on a single topic, or on a number of related topics.
DIRECTORY	A list, often serial, of persons or organisations systematically or alphabetically arranged giving some information about the single units, usually at least addresses.
FIXED PERIOD REPORT	See REPORT (fixed period)
INDEX TO RESEARCH/ THESES	An ordered reference list, often serial, providing summaries of research in progress or recently completed.
INDEXING JOURNAL	A periodical publication systematically indexing the contents of a number of serials or other documents relating to a particular subject field or locality.
JOURNAL	See PERIODICAL
MAGAZINE	A periodical publication intended chiefly for the general reader. Magazines are usually published by commercial organisations, at frequent intervals and often include illustrative material.
MONOGRAPHIC SERIES	See SERIES
NEWSPAPER	A periodical publication, usually published daily, issued on newsprint and containing general news coverage rather than being oriented toward specific subject matter.
NEWSLETTER	A periodical usually published by an organisation containing current information of interest to its members. Much of the contents consist of numerous short news items. The publication usually appears at frequent intervals.

PERIODICAL	A type of serial in which the parts (called issues) usually appear more frequently than annually (there are some exceptions) and are generally characterised by two or more of the following features: (i) regularity of publication (ii) consecutive and systematic numbering and dating (iii) variety of contents and contributors, both within each issue and from one issue to another.
PROCEEDINGS	A publication, often serial, containing the texts of papers communicated to a conference, society or institution and sometimes also reporting or transcribing discussions arising from the papers and business transacted in connection with them.
REPORT (fixed period)	A serial publication that appears at regular stated intervals (often annually), containing an account of the activities of an organisation during the time interval stated.
SERIAL	A publication of indefinite duration appearing in sequence (regularly or not), under a common title, the order of issues being ascertainable from numbers or dates appearing in each issue. The term embraces periodical and series, also generally, those types of publication such as yearbooks, almanacs and some directories in which the successive parts are essentially revised or updated editions of the proceding parts, published at relatively frequent or more or less regular intervals.
SERIES	A type of serial in which the parts are generally characterised by (i) distinctive part titles in addition to a series statement (ii) the inclusion of only a single work, or a closely regulated group of works, in each part (iii) the absence of predetermined intervals in the issue of successive parts
STATISTICAL BULLETIN	A publication, usually serial, containing 'official' or 'authoritative' topical information held in a statistical form.
YEARBOOK	A type of serial designed to present a body of reference material relating to specific years, or intended to be revised at annual intervals.

APPENDIX 2

LIBRARIES VISITED DURING FIELD DATA COLLECTION: an analysis of serial resources

1. ADVERTISING ASSOCIATION LIBRARY
Abford House, Wilton Road, London SW1V INJ

Small library / Information division with a good serial collection, approximately 100 titles, covering advertising media and marketing. Majority of titles English language and current - limited backruns. Nearly all titles on open access and there is plenty of working space. No printed list of serial holdings is available.

2. BRITISH LIBRARY LENDING DIVISION
Boston Spa, West Yorkshire

The largest collection of current social science serials in the country - in the region of 8,000 titles. The collection covers all the recognised social sciences. Psychology is particularly well represented. Coverage of forgeign language serials is excellent, superior to that of many of the more established collections. The United States and Eastern Europe are particularly well represented. Backruns of most serials are incomplete, especially serials published prior to 1950. Annual reports, proceedings and secondary service publications are very well covered. In using the BLLD's collection one is likely to be inconvenienced on two counts - (i) because the BLLD is a lending library many of the more popular and current serials will be on loan - (ii) most of the serials are not in bound volumes and this greatly reduces the speed of searching. Working conditions on the whole are favourable though limited opening hours can prove very restrictive. Although a printed serials list does exist, *Current serials received by the BLLD*, it should be pointed out that it does not present a full picture of the serial resources as it does not include dead serials.

3. BRITISH LIBRARY OF POLITICAL AND ECONOMIC SCIENCE,
London School of Economics, Houghton Street, London WC2

The library houses a very large collection of social science serials, about 24,000 in number. The collection is very strong in economics, politics, statistics and sociology and adequate in in psychology, geography and anthropology. There is good, though variable coverage of foreign language serials. European serials are particularly well represented. Most serials have complete or long backruns and one of the most important features of the collection is its inclusion of a large number of dead serials. Because the collection includes much older material and some of the less common forms of serial proceedings, reports etc., it is particularly valuable for retrospective searching.

The serial collection is scattered throughout a large number of rooms, the bulk of it being held in the stacks. This restricts and disrupts searching considerably. Working conditions are poor - the library is short of space and very crowded. A serials catalogue does exist with a subject approach; a printed list is in preparation.

4. DEPARTMENT OF EDUCATION LIBRARY
Elizabeth House, York Road, London SE1

A large (about 600 serials) and wide ranging collection of Education serials is held by the library. The value of the collection is enhanced considerably by the favourable working conditions. Education is interpreted very broadly and consequently fringe areas like psychology, sociology and librarianship are fairly well represented. The library houses a very good collection of British and Foreign government serials. A good deal of the material held is placed on open access and as a result full use can be made of its quite considerable resources. A printed serials list is available.

5. DEPARTMENT OF EMPLOYMENT AND PRODUCTIVITY LIBRARY
11/12 St James's Square, London SW1

Approximately 560 serials relating in the main to labour relations, safety, welfare, industrial economics and public administration are held by the library. Coverage tends to be good for UK and USA publications but sketchy for other countries. Few foreign language serials are held. The material held tends to be that published by governments or semi-official bodies, Few academic serials are held but there is a small collection of secondary services. The collection tends to be scattered and serials are not always easily available. Backruns tend to be short, few titles are held indefinitely.

6. DEPARTMENT OF ENVIRONMENT LIBRARY
2 Marsham Street, London SW1

The total periodical holdings number 2,600, 2,200 of these being current titles. The subjects best represented in the collection are public administration, planning and transport economics. The library takes a large number of foreign language serials - about 400. It is the practice of the library to build up backruns of 'core' serials only. Only a proportion of the serials are held on open access, the remainder are housed in the stacks. Working conditions are adequate, though slightly cramped. A printed list of periodicals held is available.

7. DEPARTMENT OF TRADE AND INDUSTRIAL CENTRAL LIBRARY
1 Victoria Street, London SW1H OET

The number of current serials held by the libraries servicing the DTI is 4,250. Very few non-current serials are held. The sheer size of the collection makes it an invaluable source of serial information in economics, particularly of data held in a statistical form. Generally speaking the library takes very few serials in foreign languages, though it does take statistical serials from all over the world.

Retention of back numbers of serials varies considerably but in the main the serials that are held for a long period fall in the following categories:- core journals, statistical serials, and law reports. There is no printed list of serial holdings.

8. INSTITUTE OF ADVANCED LEGAL STUDIES LIBRARY

University of London, 25 Russell Square (17 Russell Square
from Summer 1975), London WC1B 5DR

A comprehensive collection of law serials is maintained at the Institute for use in post-graduate research. Over 2000 titles are currently taken by the library, including series of legislation, law reports, digests of cases and periodicals. There are comprehensive collections for the British Isles and for British and former British jurisdiction overseas. The major American law reports are taken and there is an excellent collection of American university and other law reviews comprising some 380 titles. The major series of legislation, law reports and periodicals are taken for Western European law and there is also a significant collection of international law serials. A selection of Latin American titles is received. A few titles in fields peripheral to law are taken as, for example, public administration, international affairs, criminology. It is the policy of the library to acquire complete backruns of most titles as and when availability and the financial situation allow.

The current serial titles are classed and shelved with the monographs for the jurisdiction or subject to which they relate and are shelved adjacent to the reading areas. Dead serials, with some exceptions, are shelved in the basement stocks. Working conditions will be excellent after the move to a new purpose built library in 1975.

The Library's periodical holdings as at 1968 are listed in the Institute's Union List of Legal Periodicals, 2nd ed. 1968. The Union List of Commonwealth and South African Law, 1963, the Union List of United States Law Literature, 2nd ed. 1967, the Union List of West European Legal Literature, 1966, and the Union List of Air and Space Law Literature, 2nd ed. 1975, give the Library's holdings of legislation, law reports and digests for the jurisdictions and subjects covered, at the time of publication. The last two lists include relevant periodicals in addition to other types of serials.

9. INSTITUTE OF EDUCATION LIBRARY
University of London, 11-13 Ridgmount Street, London WC1E 7AH

A very large number of serials are held by the library, current titles alone numbering 1,700. While education is best represented, good collections exist for the fields of sociology and psychology. The largest number of the publications are British. A good deal of the material is held in the stacks and various stores which makes searching difficult. In comparison, the DES Library (the other major library specializing in Education in London) working conditions are poor.

10. INSTITUTE OF HISTORICAL RESEARCH LIBRARY
University of London, Senate House, London WC1

The total serial holdings number about 600 of which 500 are current serials. The subjects represented are history of Western Europe and Wester European expansion overseas. The library subscribes to a large number of foreign language serials, 175 in all. The library holds complete of near complete runs of most titles. Working conditions are good and most of the serials are accessible. There is no printed list of serial holdings.

11. LANGUAGE TEACHING LIBRARY
20 Carlton House Terrace, London SW1Y 5AP
(British Council English Teaching Information Centre - official address 10 Spring Gardens, London SW1A 2BN - and Centre for Ihformation on Language Teaching and Research)

With a collection of approximately 430 serial titles the library offers one of the most comprehensive collections of serials in the fields of linguistics and language teaching. Approximately 370 of these are current serials of which 127 are in foreign languages. Generally speaking it is the policy of the library to build up backruns of serials and in consequence the majority of serials have complete backruns. The bulk of serials are on open access and easily consulted. Working conditions are excellent A duplicated list of serial holdings is available.

12. NATIONAL NSTITUTE OF ECONOMIC AND SOCIAL RESEARCH LIBRARY
2 Dean Trench Street, Smith Square, London SW1

The total serial holdings of the NIESR library are 600, of which 500 are current. The bulk of the serials relate to economics. The Library is a valuable source for statistical serials annual reports and some of the more obscure monographic series. United States publications are particularly well represented. Of the 500 current serials taken, 80 are foreign language titles. The library holds long runs of a number of 'core' journals, otherwise the material is discarded after a time interval. No list of serials held exists.

13. ROYAL ANTHROPOLOGICAL INSTITUTE LIBRARY,
6 Burlington gardens, London W1X 2EX

The library takes currently 650 titles covering all aspects of anthropology. A large number of these are foreign language serials. The collection is the most comprehensive in the country. Backruns are complete for nearly all the titles held. A printed list of serial holdings is available. It was last published in December 1968, and is updated by an annual listing.

14. ROYAL GEOGRAPHICAL SOCIETY LIBRARY,
Kensington Gore, London SW7 2AR

600 current titles covering the fields of geography and travel are taken by the library. Subscriptions are made to foreign language serials. Generally speaking backruns tend to be long and complete. In addition retrospective searching is further assisted by the large number of 'dead' titles held. Most of the material is on open access and easily accessible. Working conditions are very good with plenty of space for consultation. No list of serial holdings is available.

15. ROYAL INSTITUTE OF INTERNATIONAL AFFAIRS LIBRARY,
Chatham House, 10 St James's Square, London SW1

About 650 journals are currently taken, many being in French, German, Italian, Spanish and Russian. The subject sovered are international politics, economics and jurisprudence. All lapsed journals and all files pre-1960 are in the stacks in another building. There are no statistics available for journals no longer taken nor for serials other than journals.

16. ROYAL INSTITUTE OF PUBLIC ADMINISTRATION LIBRARY
Hamilton House, Mabledone Place, London WC1H 9BD

A small but relatively comprehenisve collection of serials. Approximately 100 periodicals are taken, 71 of these being current. In addition however the library takes a large number of Government reports. The collection of annual reports is particularly good. Public administration and general politics are the main fields of interest. No foreign language serials are held. It is the practice of the library to build up backruns of most titles. Most of the material

APPENDIX 3

BIBLIOGRAPHIES CONSULTED DURING EDITING OF CLOSSS DATA

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Appendix 4

a) Pilot sheet

DISISS - SERIALS DATA RECORDING SHEET

PLEASE NOTE

(1) When working in the field collect data where possible from inspection of copies and the catalogue of serials where available

(2) Checking from published bibliographies will be done later by the editors, especially for items not marked (*)

(3) Do not spend more than 5 - 10 minutes on any problem. Rechecking will be done later by editors. Try and collect at least those marked (*)

NAME OF COLLECTOR

LIBRARY WHERE
DATA COLLECTED

VOLUME (OR ISSUE(S)) OF ITEM FROM WHICH DATA RECORDED ON THIS SHEET REFERS (PARTICULARLY QUESTIONS: (10), (12), (13), (14), (15), (16), (17), (18) and (19), WHERE THE DATA IS VOLUME/ISSUE SPECIFIC

VOLUME

ISSUES (Where data does not apply to whole volume)

DATE

DATA ELEMENTS

THE ITEMS (*) SHOULD BE THE MINIMUM RECORDED

---

*(1) TITLE (In full, as it appears currently)

---

(2) ALTERNATIVE TITLE(S)

---

(3) FORMER TITLE(S)

---

*(4) TITLE IN ENGLISH IF DIFFERENT FROM (1)

---

(5) PUBLISHER

---

(6) PUBLICATION SPONSOR

(i) Commercial B
(ii) Learned society or professional body A
(iii) : (i) + (ii) A B
(iv) Government C
(v) State monopoly C
(vi) Educational institution D
(vii) : (ii) + (vi) A D
(viii) : (i) + (vi) B [illegible]
(ix) Private body or firm H
(x) International organisation F
Others I

---

*(7) BEGINNING DATE

*(8) ENDING DATE, IF ANY

(9) TYPE OF ISSUING BODY

Association(s), Society, Prof. Body (Membership instns)	A	Government (National, Local)	C	International Organisation (i.e., UN, EEC, NATO)	F
Publisher	B	Educational institution	D	Commerical/business enterprise	G
		Political/pressure groups	E	Private/individual	H

OTHERS (Description/type) I

---

(10) PUBLISHER (Name)

---

(11) COUNTRY OF PUBLICATION See list

---

* (12) TYPE OF SERIAL

Periodical 1 Monographic series 2

---

* (13) DESCRIPTION OF SERIAL (Tick one category)

Periodical journal	A	Bibliography	F	Fixed period report	J
Abstracts	B	Statistics	G	Conference proceedings	K
Indexes	C	Index to research/theses	H	Legal/legislation, report articles	L
Contents list	D	Yearbook	I	Cases and case notes	M
Book reviews	E			Accessions list	N
				Monographic series	P

OTHERS (Indicate type) Q

---

* (14) NATURE OF CONTENTS (Indicate major categories by cross and minor features by tick)

Articles	A	Contents lists	E	Cases and case notes	H
Abstracts	B	Book reviews and new publications (not advertisements)	F	Accessions lists	I
Indexes	C			News articles	J
Bibliographies	D			Review articles	K
		Conference proceedings	G	Statistics	L

OTHERS (Indicate type) M

---

* (15) ABSTRACTS WITH ARTICLES (Tick in boxes)

All main articles 1 Some 2 None 3

---

* (16) LANGUAGE(S) OF CONTENTS See list

---

* (17) ASSESSMENT OF SUBJECT CONTENT (Take as guidance the prepared list of subject headings)

See list

---

* (18) NUMBER OF ARTICLES IN 1969 (Listed main articles in index/list of contents)	(19) SUBSCRIPTION PRICE (1969) (Please indicate where alternative data is used)

---

(20) COVERAGE BY INDEXING AND ABSTRACTING SERVICES (Where this is listed within the item)

b) Main sheet

DISISS - SERIALS DATA RECORDING SHEET

PLEASE NOTE (1) When working in the field collect data where possible from inspection of copies and the catalogue of serials where available

(2) Checking from published bibliographies will be done at the editing stage, especially for items not marked (*)

(3) Do not spend more than 5 - 10 minutes on any problem. Rechecking will be done later at the editing stage. Try and collect at least those data elements marked (*)

NAME OF COLLECTOR	LIBRARY WHERE DATA COLLECTED

VOLUME (OR ISSUE(S)) OF ITEM FROM WHICH DATA RECORDED ON THIS SHEET REFERS (PARTICULARLY QUESTIONS: (7), (12), (13), (14), (15), (16), (18), (19) and (20)), WHERE THE DATA IS VOLUME/ISSUE SPECIFIC

VOLUME

ISSUES (where data does not apply to whole volume)

DATE

DATA ELEMENTS

THE ITEMS (*) SHOULD BE THE MINIMUM RECORDED

---

* (1) TITLE (In full, as it appears currently)

---

* (2) TITLE IN ENGLISH IF DIFFERENT FROM (1)

---

(3) ALTERNATIVE TITLE(S)

---

(4) PREVIOUS TITLE(S)

---

* (5) BEGINNING DATE	* (6) ENDING DATE, IF ANY

* (7) FREQUENCY/ISSUES PER ANNUM (Indicate year taken)

---

(8) ISSUING BODY

(9) COUNTRY OF PUBLICATION

---

*(10) NUMBER OF ISSUES PER ANNUM

---

*(11) TYPE OF SERIAL

Periodical 1   Monographic series 2

---

*(12) TYPE OF MATERIAL

Journal	A	Index to research/theses	H
Abstracts	B	Yearbook	I
Indexes	C	Fixed period report	J
Contents list	D	Conference proceedings	K
Book review	E	Legal (legislation, report, articles)	L
Bibliography	F	Cases and case notes	M
Statistics	G	Accessions list	N
Others	Q	Monographic series	P

---

*(13) NATURE OF CONTENTS

Indicate three main areas by a cross. Tick for minor features

Articles	A	Statistics	L
Abstracts	B	Conference proceedings	G
Indexes	C	Cases and case notes	H
Bibliographies	D	Accessions lists	I
Contents lists	E	News articles	J
Book reviews and new publications (Not advertisement)	F	Review articles	K
		Others	M

---

*(14) LANGUAGE(S) OF CONTENTS

---

(15) SUBSCRIPTION PRICE (1969)

(Please indicate where alternative data is used)

---

(16) COVERAGE BY INDEXING AND ABSTRACTING SERVICES (Where this is listed within the item)

---

*(17) ABSTRACTS WITH ARTICLES

All main articles 1   None 3
Some 2

*(18) NUMBER OF ARTICLES in 1969
(Listed main article in index/list of contents)

---

*(19) ASSESSMENT OF SUBJECT CONTENT

Take as guidance the prepared list of subject headings in the Manual and use or modify accordingly

c) New Sheet

CLOSSS

Library____________

00

Title

01

subtitle (02) alternative title(s) (03) previous title(s) (04)

05 Beg.date

06 End.date
X cont.
- doubtful

07 No.of issues per yr:
X irregularly
G every 2 yrs.
H every 3 yrs.
Z other

Issuing Body

08

09

Publisher

10

09 Issuing Body		13 Desc.of serial		(13 cont.)		14 Desc. of conts.			
		1 only allowed				(underline main ones and ring minor)			
Soc, Assoc.	A	Jrnl	A	Fixed period rpt	J	Articles	A	Acc list	I
Publ	B	Absts	B	Conf. proc	K	Abstrs	B	News art	J
Gov	C	Indexes	C	Legal (Legis)	L	Indexes	C	Rev art	K
Educ. Inst.	D	Cont lists	D	Case notes	M	Biblios	D	Stats	L
Polit. gr.	E	Bk reviews	E	Access.list	N	Conts list	E	Others	M
Int. org.	F	Bibliog	F	Mono series	P	Bk revs	F		
Com/Bus	G	Stats	G	Others	Q	Conf proc	G		
Priv/Indiv	H	Ind/res/th	H			Case nts	H		
Other	I	Yearbook	I						

Country____________

11

12
1 = Periodical
2 = Monographic series

13

14

15
1 = All
2 = Some
3 = None
Abstracts

Languages____________

Subjects____________

16

17

No. of articles a year

18

Price

19 £______

0 Free
A members
B varies/other

A & I services

20

Appendix 5 DATA VET PROCEDURES

Field Code	Description of Field	Description of contents of field, and the data vet or translation performed
	CLOSS Number (Record number)	Five digit number. For old format data, this number is followed by an X and all subsequent field codes are converted to their new format equivalents, see Appendix 4.
01	Title	One field only must be present, and may contain up to 250 valid characters. A check message is printed if the data contains less than 4 characters. The valid character set contains the following characters: space., (-') letters A to Z and numbers 0 to 9.
02	Subtitle	Only one field is allowed and is vetted as for field 01.
03	Alternative Title(s)	Field may be duplicated. Each field is vetted as for field 01
04	Previous Title(s)	Field may be duplicated. Each field is vetted as for field 01
05	Beginning Date	Only one field is allowed, and is a four digit date, not later than the current year. A check message is printed if the date is before 1800.
06*	Ending Date	Only one field is allowed, and is either a four digit date which must be after the date given in field 05, or a single character code translated as follows: X CONTINUING - DATE UNCERTAIN
07	Frequency of publication (issues per year)	Only one field is allowed, and is either a number of up to three digits, (if a single digit, may not be 0) printed with the message "ISSUES PER YEAR", or a single character code translated as follows: X ISSUED IRREGULARLY G ISSUED EVERY 2 YEARS H ISSUED EVERY 3 YEARS Z OTHER ISSUE PERIOD
08	Issuing Body or Bodies	Field may be duplicated. Each field is vetted as for field 01.
09+	Type of Issuing Body	Only one field is allowed. String of up to nine characters. Each character is translated against a table. A character may only appear once in the string.
10	Publisher(s)	Field may be duplicated. Each field is vetted as for field 01.
11+	Country or Countries of Publication	Field may be duplicated. Two character code translated against a table. A check message is printed if the code does not appear in the table.
12*	Type of Serial	Only one field is allowed. Single character code translated against a table.
13*	Description of Serial	Only one field is allowed. Single character code translated against a table.
14+	Nature of Contents	Only one field is allowed. String of up to 13 characters. Each character is translated against a table. A character may only appear one in the string.

Field Code	Description of Field	Description of contents of field, and the data vet or translation performed
15*	Abstracts with Articles	Only one field is allowed. Single character code.
16*+	Language(s) of Contents	Field may be duplicated. Either a three character language code, or a four character code consisting of a three character language code followed by either B or C. Codes of three characters mustappear before codes of four. The three character language code is translated against a table. For valid four character codes, the letters ABS. or EDN., representing the codes B or C respectively, are inserted next to the translated language. A check message is printed if the language code does not appear in the table.
17*+	Assessment of Subject Content	Field may be duplicated. Two character code translated against a table.
18	Number of Articles	Only one field is allowed. Number of up to 3 digits, printed with the message "ARTICLE(S)".
19*	Subscription Price	Only one field is allowed of either a single character code translated against the following table: 0 FREE A LIMITED TO MEMBERS B VARIES/OTHER ETC. or a number of up to five digits. A single number (other than 0) is changed to a two digit number by preceding it with a zero. A three digit number commencing with a zero is reduced to a two digit number by ignoring the first character. The data is then printed in pounds pence format.
20	Coverage by Indexing and Abstracting Services	Field may be duplicated. Each field is vetted as for field 01.
21	Previous Title(s)	Field may be duplicated. Five digit record number(s) of the former title record(s). If the number is followed by an X, the X is ignored. The data is printed with a "FORMERLY" message.
22	Subsequent Title(s)	Field may be duplicated. Five digit record number(s) of the subsequent title record(s). If the number is followed by an X, the X is ignored. The data is printed with a "CONTINUED AS" message.

NOTES

All fields are optional except field 01.

There is no limit to the number of times a particular field may appear, though the total data length of any record may not exceed 960 characters.

Invalid data is printed enclosed in brackets and preceded by a string of question marks.

* For these fields other codes were allowed for data input which the update program corrected and then printed suitable check or recode messages.

+ For these fields a special program was written to rearrange multiple coded entries into alphabetical sequence, and to ensure that for each field the codes were unique.

Appendix 6

Examples of the reports of the analysis programs

I Code analysis

- a analysis of single occurrence of coded field
- b " " " " " numeric codes
- c " " " " " numeric values
- d " " multi-occurring codes
  - i country
  - ii subject
  - iii language
  - iv contents
- e " " title-type fields

II Code combinations analysis

- a subject
- b language
- c nature of contents

III Time and length analysis

- a time analysis
- b graphical presentations of time analysis
- c longevity of titles
- d length of titles (characters)

IV KWOC Index

Appendix 6 Ia

ANALYSIS OF CODED FIELDS FOR CURRENT SERIALS

FIELD 13 DESCRIPTION OF SERIAL

	CODE	(1)	
PERIODICAL JOURNAL	(A)	2623	72.15%
ABSTRACTS	(B)	100	2.75%
INDEXES	(C)	25	0.68%
CONTENTS LISTS	(D)	8	0.22%
BOOK REVIEWS	(E)	9	0.24%
BIBLIOGRAPHY	(F)	38	1.04%
STATISTICS	(G)	163	4.48%
INDEX TO RESEARCH	(H)	6	0.16%
YEARBOOK	(I)	84	2.31%
FIXED PERIOD REPORT	(J)	361	9.93%
CONFERENCE PROC.	(K)	70	1.92%
LEGAL/LEGISLATION	(L)	11	0.30%
CASES & CASE NOTES	(M)	7	0.19%
ACCESSIONS LISTS	(N)	4	0.11%
MONOGRAPHIC SERIES	(P)	107	2.94%
OTHERS	(Q)	19	0.52%
TOTAL		3635	

Appendix 6 Ib

ANALYSIS OF CODED FIELDS FOR CURRENT SERIALS

FIELD 07 FREQUENCY OF PUBLICATION

	CODE	(1)	
ISSUED IRREGULARLY	(X)	194	5.21%
ISSUED EVERY 2 YEARS	(G)	15	0.40%
ISSUED EVERY 3 YEARS	(H)	4	0.10%
1 ISSUE PER YEAR		792	21.28%
2 ISSUES PER YEAR		279	7.49%
3 ISSUES PER YEAR		218	5.85%
4 ISSUES PER YEAR		1029	27.65%
5 ISSUES PER YEAR		36	0.96%
6 ISSUES PER YEAR		298	8.00%
7 ISSUES PER YEAR		5	0.13%
8 ISSUES PER YEAR		35	0.94%
9 ISSUES PER YEAR		39	1.04%
10 ISSUES PER YEAR		47	1.26%
11 ISSUES PER YEAR		38	1.02%
12 ISSUES PER YEAR		555	14.91%
13-23 ISSUES PER YEAR		7	0.18%
24-26 ISSUES PER YEAR		45	1.20%
27-51 ISSUES PER YEAR		6	0.16%
52 ISSUES PER YEAR		76	2.04%
53+ ISSUES PER YEAR		3	0.08%
	TOTAL	3721	

Appendix 6 Ic

ANALYSIS OF CODED FIELDS FOR CURRENT SERIALS

FIELD 18 NUMBER OF ARTICLES

CODE	(1)	
0 ARTICLES	330	10.43%
1 ARTICLE	335	10.59%
2-4 ARTICLES	108	3.41%
5-9 ARTICLES	270	8.54%
10-14 ARTICLES	277	8.76%
15-19 ARTICLES	275	8.69%
20-29 ARTICLES	432	13.66%
30-39 ARTICLES	292	9.23%
40-49 ARTICLES	179	5.66%
50-59 ARTICLES	102	3.22%
60-69 ARTICLES	93	2.94%
70-79 ARTICLES	71	2.24%
80-89 ARTICLES	48	1.51%
90-99 ARTICLES	41	1.29%
100+ ARTICLES	308	9.74%
TOTAL	3161	

Appendix 6 Id i

ANALYSIS OF CODED FIELDS FOR CURRENT SERIALS

FIELD 11 COUNTRY OF PUBLICATION

	CODE	(1)	(2)
UNITED STATES	(US)	942	3
UNITED KINGDOM	(UK)	1171	4
AUSTRIA	(AU)	18	1
BELGIUM	(BE)	66	
BULGARIA	(BU)	4	
CZECHOSLOVAKIA	(CS)	31	
DENMARK	(DK)	21	
FINLAND	(FI)	15	
FRANCE	(FR)	244	2
EAST GERMANY	(GE)	17	
WEST GERMANY	(GW)	189	2
GERMANY	(GG)	6	
GREECE	(GR)	8	
HUNGARY	(HU)	32	
ITALY	(IT)	113	
IRELAND	(IE)	15	
LUXEMBOURG	(LU)	4	
NETHERLANDS	(NE)	83	2
NORWAY	(NO)	12	
POLAND	(PL)	30	
PORTUGAL	(PO)	9	
RUMANIA	(RM)	23	
SPAIN	(SP)	34	2
SWEDEN	(SW)	31	
SWITZERLAND	(SZ)	90	
U.S.S.R.	(UR)	31	
YUGOSLAVIA	(YU)	13	

Appendix 6 Id ii

ANALYSIS OF CODED FIELDS FOR CURRENT SERIALS

FIELD 17 (CONT)

	CODE	(1)	(2)	(3)
GEOGRAPHY	(IA)	111	26	6
GEOGRAPHY, CULTURAL	(IB)	2	2	2
GEOGRAPHY, ECONOMIC	(IC)	3	8	1
GEOGRAPHY, POLITICAL	(ID)		1	
GEOGRAPHY, SOCIAL	(IE)	1	6	2
HISTORY	(JA)	60	41	7
LINGUISTICS	(KA)	158	79	4
SEMANTICS	(KD)	1		
MANAGEMENT	(LA)	65	45	10
PERSONNEL MANAGEMENT	(LC)	9	2	
ORGANISATION & METHODS	(LD)	4		
SYSTEMS ANALYSIS	(LF)	2		
POLITICAL SCIENCE	(MA)	172	103	19
PUBLIC ADMINISTRATION	(MB)	54	31	1
PUBLIC LAW	(MC)	2	2	1
INTERNATIONAL RELATIONS	(MD)	63	33	2
POLITICAL THEORY	(MF)	3		
POLITICAL BEHAVIOUR	(MH)		1	
PSYCHOLOGY, GENERAL	(NA)	158	37	14
CLINICAL PSYCHOLOGY	(NB)	4	1	
EDUCATIONAL PSYCHOLOGY	(NC)	3		
EXPERIMENTAL PSYCHOLOGY	(ND)	2	2	2
PERSONALITY	(NE)	1	2	2
SOCIAL PSYCHOLOGY	(NF)	1	1	1
INDUSTRIAL PSYCHOLOGY	(NG)	1		1
APPLIED PSYCHOLOGY	(NH)	3	1	3
SOCIAL PSYCHIATRY	(NI)	15	12	7

YSIS OF CODED FIELDS FOR CURRENT SERIALS

FIELD 16 LANGUAGE OF CONTENTS

	CODE	(1)	(2)	(3)	(4)	(5)
AFRIKAANS	(AFR)	1	12		1	
AFRO-ASIATIC	(AFA)				1	
ARABIC	(ARA)		8	3	1	1
BULGARIAN	(BUL)	1	1			
CHINESE	(CHI)		4			1
CROATIAN	(CRO)		6		1	
CZECH	(CZE)	9	3	3	4	2
DANISH	(DAN)	7	4			
DUTCH	(DUT)	13	11	2	5	1
ENGLISH	(ENG)	2492	263	95	56	14
FINNISH	(FIN)	3	2			
FLEMISH	(FLE)	1	6	4		
FRENCH	(FRE)	241	148	97	52	14
GERMAN	(GER)	1394	55	61	44	14
GREEK, MODERN	(GRE)		5			
HEBREW	(HEB)	1	5			
HINDI	(HIN)		1	1		
HUNGARIAN	(HUN)	6		3	5	2
ITALIAN	(ITA)	63	14	7	14	7
JAPANESE	(JAP)	10	12	1		
LATIN	(LAT)			1		
NORWEGIAN	(NOR)	7		1		
POLISH	(POL)	11	5	1	4	1
PORTUGUESE	(POR)	20	5		3	1
RUMANIAN	(RUM)	9		4	1	
RUSSIAN	(RUS)	18	8	14	26	6
SERBIAN	(SER)		6		1	

Appendix 6 Id iv

ANALYSIS OF CODED FIELDS FOR CURRENT SERIALS

FIELD 16   NATURE OF CONTENTS

	CODE	(1)	(2)	(3)	(4)	(5)	(6)
ARTICLES	(A)	429	883	861	346	57	40
ABSTRACTS	(B)	42	49	45	45	15	7
INDEXES	(C)	17	31	20	17	15	8
BIBLIOGRAPHIES	(D)	23	60	134	101	47	19
CONTENTS LISTS	(E)	4	13	32	26	14	6
BOOK REVIEWS	(F)	11	349	619	504	55	58
CONFERNC OF PROC.	(G)	57	50	87	97	43	27
CASES & CASE NOTES	(H)	5	20	67	41	15	19
ACCESSION LISTS	(I)	3	1	12	12	5	5
NEWS ARTICLES	(J)	56	262	425	230	41	35
REVIEW ARTICLES	(K)	7	31	219	86	22	21
STATISTICS	(L)	142	265	117	94	41	22
[illegible]	(M)	19	47	65	41	17	11

Appendix 6 Ie

```
ANALYSIS OF CODED FIELDS FOR CURRENT SERIALS

     ANALYSIS    NUMBER OF 01 TYPE FIELDS

                                 CODE          (1)         (2)         (3)         (4)         (5)

                FIELD CODE 01                 3922
                FIELD CODE [illegible]         230
                FIELD CODE 03                  356          26           5           1
                FIELD CODE 04                  430          61          14                       1
                FIELD CODE 21                  426           7           2
                FIELD CODE 22                    3
                FIELD CODE 10                 3675          30           1
                FIELD CODE 08                 1653          22           6           1           1
                FIELD CODE 20                  165          77          42          12          19
```

Appendix 6 IIa

ANALYSIS OF CODE COMBINATIONS FOR ALL SERIALS

FIELD 17 COMBINATIONS OF SUBJECT CODES (CONT)

15	0.31%	HA SA	POLITICAL SCIENCE, LAW
1	0.02%	HA SB	POLITICAL SCIENCE, INTERNATIONAL LAW
4	0.08%	HA WA	POLITICAL SCIENCE, PHILOSOPHY
67	1.40%	HB	PUBLIC ADMINISTRATION
1	0.02%	HB HC	PUBLIC ADMINISTRATION, PUBLIC LAW
1	0.02%	HB HD	PUBLIC ADMINISTRATION, INTERNATIONAL RELATIONS
4	0.08%	HB PA	PUBLIC ADMINISTRATION, SOCIAL POLICY
1	0.02%	HB PE	PUBLIC ADMINISTRATION, SOCIAL MEDICINE
2	0.04%	HB SA	PUBLIC ADMINISTRATION, LAW
3	0.06%	HC	PUBLIC LAW
1	0.02%	HC SA	PUBLIC LAW, LAW
97	2.03%	HD	INTERNATIONAL RELATIONS
1	0.02%	HD PA	INTERNATIONAL RELATIONS, SOCIAL POLICY
2	0.04%	HD QA	INTERNATIONAL RELATIONS, SOCIOLOGY
1	0.02%	HD SA	INTERNATIONAL RELATIONS, LAW
1	0.02%	HD SB	INTERNATIONAL RELATIONS, INTERNATIONAL LAW
3	0.06%	HF	POLITICAL THEORY
1	0.02%	HH PA	POLITICAL BEHAVIOUR, SOCIAL POLICY
173	3.63%	NA	PSYCHOLOGY
8	0.16%	NA NI	PSYCHOLOGY, SOCIAL PSYCHIATRY
3	0.06%	NA NI PE	PSYCHOLOGY, SOCIAL PSYCHIATRY, SOCIAL MEDICINE
1	0.02%	NA PA	PSYCHOLOGY, SOCIAL POLICY
1	0.02%	NA PA PE	PSYCHOLOGY, SOCIAL POLICY, SOCIAL MEDICINE
1	0.02%	NA PA QA	PSYCHOLOGY, SOCIAL POLICY, SOCIOLOGY
8	0.16%	NA PE	PSYCHOLOGY, SOCIAL MEDICINE
1	0.02%	NA PE QA	PSYCHOLOGY, SOCIAL MEDICINE, SOCIOLOGY
4	0.08%	NA QA	PSYCHOLOGY, SOCIOLOGY
1	0.02%	NA QA RA	PSYCHOLOGY, SOCIOLOGY, STATISTICS

ANALYSIS OF CODE COMBINATIONS FOR ALL SERIALS

FIELD 16		COMBINATIONS OF LANGUAGE CODES	(CONT)
1	0.02%	ENG DUTE	ENGLISH, DUTCH EDITION
1	0.02%	ENG ENGB FREB	ENGLISH, ENGLISH ABSTRACTS, FRENCH ABSTRACTS
1	0.02%	ENG ETN	ENGLISH, (ETN)
1	0.02%	ENG FIN	ENGLISH, FINNISH
1	0.02%	ENG FIN GER	ENGLISH, FINNISH, GERMAN
3	0.06%	ENG FLE FRE	ENGLISH, FLEMISH, FRENCH
1	0.02%	ENG FLE FREB GERB	ENGLISH, FLEMISH, FRENCH ABSTRACTS, GERMAN ABSTRACTS
121	2.56%	ENG FRE	ENGLISH, FRENCH
3	0.06%	ENG FRE ENGB FREB	ENGLISH, FRENCH, ENGLISH ABSTRACTS, FRENCH ABSTRACTS
1	0.02%	ENG FRE ENGB FREB PORB SPAB	ENGLISH, FRENCH, ENGLISH ABSTRACTS, FRENCH ABSTRACTS, PORTUGUESE ABSTRACTS, SPANISH ABSTRACTS
1	0.02%	ENG FRE ENGB FREB RUSB	ENGLISH, FRENCH, ENGLISH ABSTRACTS, FRENCH ABSTRACTS, RUSSIAN ABSTRACTS
1	0.02%	ENG FRE ENGB GERB	ENGLISH, FRENCH, ENGLISH ABSTRACTS, GERMAN ABSTRACTS
67	1.42%	ENG FRE GER	ENGLISH, FRENCH, GERMAN
1	0.02%	ENG FRE GER ENGB	ENGLISH, FRENCH, GERMAN, ENGLISH ABSTRACTS
1	0.02%	ENG FRE GER FREB	ENGLISH, FRENCH, GERMAN, FRENCH ABSTRACTS
1	0.02%	ENG FRE GER GERB	ENGLISH, FRENCH, GERMAN, GERMAN ABSTRACTS
1	0.02%	ENG FRE GER HUN	ENGLISH, FRENCH, GERMAN, HUNGARIAN
2	0.04%	ENG FRE GER HUN RUS	ENGLISH, FRENCH, GERMAN, HUNGARIAN, RUSSIAN
9	0.19%	ENG FRE GER ITA	ENGLISH, FRENCH, GERMAN, ITALIAN
8	0.16%	ENG FRE GER ITA SPA	ENGLISH, FRENCH, GERMAN, ITALIAN, SPANISH
1	0.02%	ENG FRE GER ITA SPA ENGB FREB	ENGLISH, FRENCH, GERMAN, ITALIAN, SPANISH, ENGLISH ABSTRACTS, FRENCH ABSTRACTS
1	0.02%	ENG FRE GER LAT RUS	ENGLISH, FRENCH, GERMAN, LATIN, RUSSIAN
1	0.02%	ENG FRE GER LAV	ENGLISH, FRENCH, GERMAN, (LAV)
1	0.02%	ENG FRE GER POL	ENGLISH, FRENCH, GERMAN, POLISH
1	0.02%	ENG FRE GER POL RUS	ENGLISH, FRENCH, GERMAN, POLISH, RUSSIAN

ANALYSIS OF CODE COMBINATIONS FOR ALL SERIALS'

FIELD 14 COMBINATIONS OF CONTENTS CODES (CONT)

7	0.15%	AGJL	ARTICLES, CONFERENCE PROCEEDINGS, NEWS ARTICLES, STATISTICS
2	0.04%	AGJM	ARTICLES, CONFERENCE PROCEEDINGS, NEWS ARTICLES, OTHERS
2	0.04%	AGK	ARTICLES, CONFERENCE PROCEEDINGS, REVIEW ARTICLES
2	0.04%	AGKL	ARTICLES, CONFERENCE PROCEEDINGS, REVIEW ARTICLES, STATISTICS
6	0.13%	AGL	ARTICLES, CONFERENCE PROCEEDINGS, STATISTICS
3	0.06%	AGM	ARTICLES, CONFERENCE PROCEEDINGS, OTHERS
17	0.37%	AH	ARTICLES, CASES & CASE NOTES
9	0.19%	AHJ	ARTICLES, CASES & CASE NOTES, NEWS ARTICLES
14	0.30%	AHK	ARTICLES, CASES & CASE NOTES, REVIEW ARTICLES
2	0.04%	AHL	ARTICLES, CASES & CASE NOTES, STATISTICS
1	0.02%	AI	ARTICLES, ACCESSION LISTS
3	0.06%	AIJ	ARTICLES, ACCESSION LISTS, NEWS ARTICLES
1	0.02%	AIK	ARTICLES, ACCESSION LISTS, REVIEW ARTICLES
2	0.04%	AIL	ARTICLES, ACCESSION LISTS, STATISTICS
279	6.11%	AJ	ARTICLES, NEWS ARTICLES
79	1.73%	AJK	ARTICLES, NEWS ARTICLES, REVIEW ARTICLES
1	0.02%	AJKL	ARTICLES, NEWS ARTICLES, REVIEW ARTICLES, STATISTICS
1	0.02%	AJKLM	ARTICLES, NEWS ARTICLES, REVIEW ARTICLES, STATISTICS, OTHERS
2	0.04%	AJKM	ARTICLES, NEWS ARTICLES, REVIEW ARTICLES, OTHERS
44	0.96%	AJL	ARTICLES, NEWS ARTICLES, STATISTICS
4	0.08%	AJLM	ARTICLES, NEWS ARTICLES, STATISTICS, OTHERS
23	0.50%	AJM	ARTICLES, NEWS ARTICLES, OTHERS
30	0.65%	AK	ARTICLES, REVIEW ARTICLES
8	0.17%	AKL	ARTICLES, REVIEW ARTICLES, STATISTICS
1	0.02%	AKLM	ARTICLES, REVIEW ARTICLES, STATISTICS, OTHERS
1	0.02%	AKM	ARTICLES, REVIEW ARTICLES, OTHERS

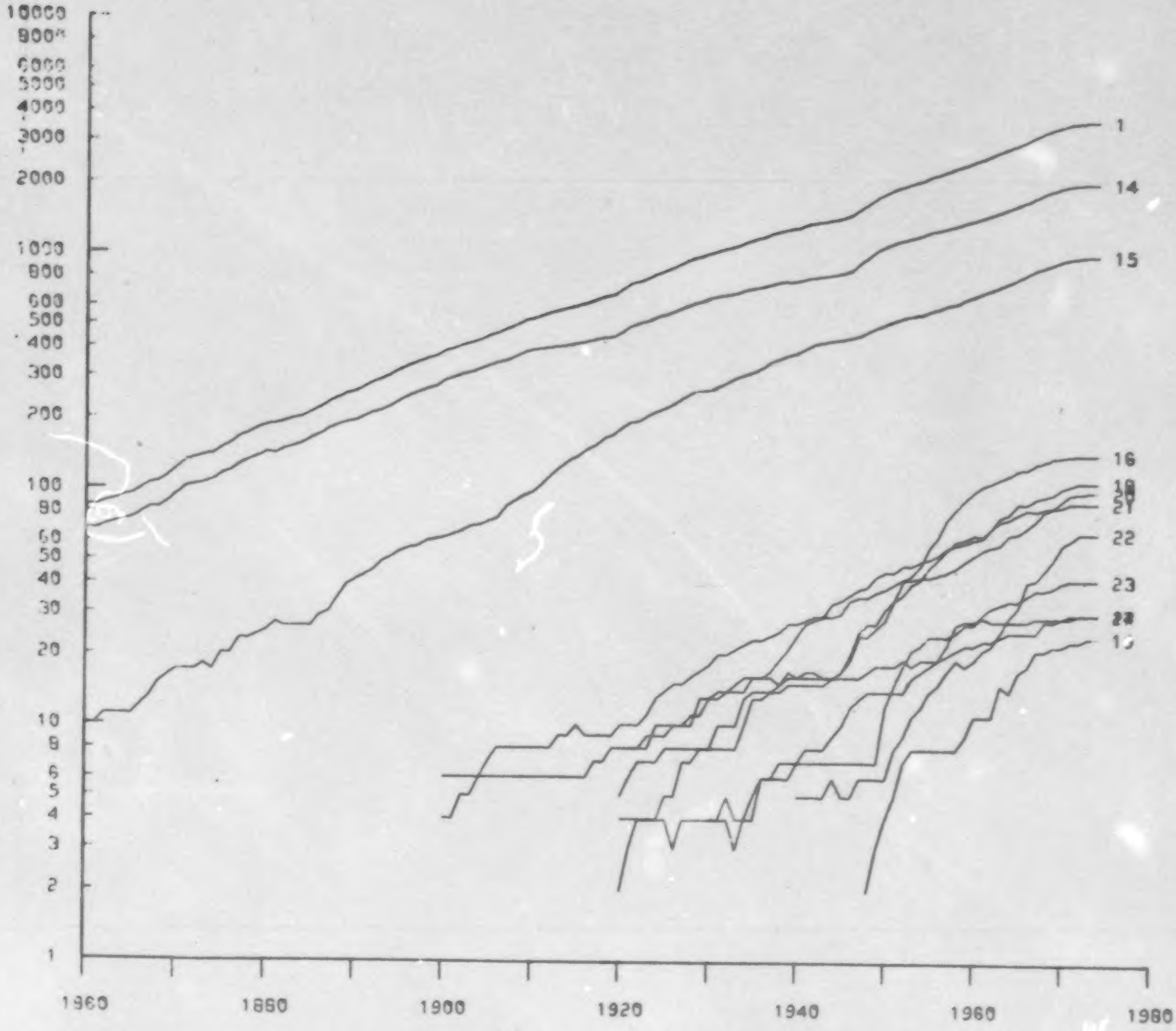
Appendix 6 IIIa

14. TIME ANALYSIS FOR SERIALS PUBLISHED IN WESTERN EUROPE

YEAR	TITLE CHANGES START	TITLE CHANGES THROUGH	TITLE CHANGES END	SERIAL CHANGES START	SERIAL CHANGES THROUGH	SERIAL CHANGES END	INCOMPLETE DATA START	INCOMPLETE DATA THROUGH	INCOMPLETE DATA END	YEAR
1920	32	456	6	30	460	2	8			1920
1919	29	439	6	20	440	3	6			1919
1918	10	434	2	9	436	1				1918
1917	7	428	1	6	430		1			1917
1916	10	419	2	10	419	2	3			1916
1915	11	410	3	10	411	3	1			1915
1914	9	404	8	9	405	7	3			1914
1913	14	398	2	12	401	1	3	1		1913
1912	6	394	3	5	396	2	1			1912
1911	7	390	3	5	392	3	3			1911
1910	14	379	4	11	386		1			1910
1909	9	375	3	7	377	3	4			1909
1908	17	360		16	361		2			1908
1907	15	345	1	13	348		5			1907
1906	9	338	2	8	341		3			1906
1905	9	330	1	7	332	1	5			1905
1904	13	318		12	319		4			1904
1903	10	308	1	10	309		4			1903
1902	6	303	1	6	304		2			1902
1901	13	291		11	293		7			1901
1900	7	285	1	7	285	1	5			1900
1899	18	267		16	269		2		1	1899
1898	5	262	2	5	263	1	1			1898
1897	11	253		10	254		2		1	1897
1896	8	245		7	246		3			1896
1895	12	233		11	234		2			1895
1894	11	222	1	10	223	1	2			1894

GRAPH PLOTS FOR SCANS:

1. Time Analysis for all serials
14. Time Analysis for serials published in Western Europe
15. Time Analysis for serials published in North America
16. Time Analysis for serials published in East Europe
17. Time Analysis for serials published in Russia
18. Time Analysis for serials published in Asia
19. Time Analysis for serials published in Arab Countries
20. Time Analysis for serials published in Central and South Asia
21. Time Analysis for serials published in Oceania
22. Time Analysis for serials published in Black Africa
23. Time Analysis for serials published in Japan
24. Time Analysis for serials published in Southern Africa



SERIALS PUBLISHED 1860-1970

Appendix 6 IIIc

LENGTH ANALYSIS FOR ALL TITLES WITH FIELD 13 A (PERIODICAL)

ANALYSIS OF LONGEVITY OF CLOSSS TITLES

UP TO 4 YEARS	273	8.69%
5-9 YEARS	642	20.43%
10-14 YEARS	453	14.42%
15-19 YEARS	332	10.56%
20-24 YEARS	239	7.60%
25-29 YEARS	282	8.97%
30-39 YEARS	222	7.06%
40-49 YEARS	198	6.30%
50-59 YEARS	172	5.47%
60-69 YEARS	91	2.89%
70-79 YEARS	72	2.29%
80-89 YEARS	65	2.06%
90-99 YEARS	36	1.14%
100-109 YEARS	20	0.63%
110-119 YEARS	13	0.41%
120-149 YEARS	24	0.76%
150+ YEARS	7	0.22%
TOTAL	3141	

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LENGTH ANALYSIS FOR ALL TITLES WITH FIELD 13 A (PERIODICAL)

     ANALYSIS OF LENGTH OF CLUSSS FIELD CODE 01

               UP TO 9 CHARACTERS               337          9.05%

               10-19 CHARACTERS                1089         29.26%

               20-29 CHARACTERS                 996         26.76%

               30-39 CHARACTERS                 577         15.50%

               40-49 CHARACTERS                 366          9.83%

               50-59 CHARACTERS                 178          4.78%

               60-69 CHARACTERS                  98          2.63%

               70-79 CHARACTERS                  49          1.31%

               80-89 CHARACTERS                  16          0.42%

               90-99 CHARACTERS                   9          0.24%

               100+ CHARACTERS                    6          0.16%

                    TOTAL                      3721          *
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EXPLORATIONS	EXPLORATIONS IN ENTREPRENEURIAL ECONOMIC HISTORY (04955/01 ECONOMICS, HISTORY)
EXPORT	AMERICAN IMPORT AND EXPORT BULLETIN (00332/01 ECONOMICS)
•	BRITISH EXPORT TRADE RESEARCH ORGANISATION REVIEW (00811/03 ECONOMICS)
•	EMPIRE PRODUCTION AND EXPORT (03141/01 INDUSTRIAL ECONOMICS, INTERNATIONAL ECONOMICS)
•	EXPORT TIMES (04351/01 INTERNATIONAL ECONOMICS)
•	IMPORT AND EXPORT GUIDE (04724/01 ECONOMICS)
•	MONTHLY INTERNATIONAL EXPORT MAGAZINE (00301/03 ECONOMICS)
•	PRODUCTION AND EXPORT (03142/01 INDUSTRIAL ECONOMICS, INTERNATIONAL ECONOMICS)
•	WELTWIRTSCHAFTSZEITUNG (INDUSTRIE-EXPORT-UND HANDELSZEITUNG) (02460/01 ECONOMICS)
EXPORTATEURS	BULLETIN DU SYNDICAT DES EXPORTATEURS FRANCAIS D'INDOCHINE (03055/01 ECONOMICS)
EXTENDING	ORGAN OF THE UNITED SOCIALIST MOVEMENT UPHOLDING AND EXTENDING THE WORKERS REVOLUTION IN SPAIN AND UNFURLING THE BANNER OF THE CNT-FAI (02128/02 POLITICAL SCIENCE)
EXTENSION	JOURNAL OF EDUCATIONAL RESEARCH AND EXTENSION (01537/01 EDUCATION)
EXTERIOR	COMMERCIO EXTERIOR (04555/01 ECONOMICS)
EXTERNAL	AUSTRALIAN EXTERNAL TERRITORIES (00761/01 SOCIAL SCIENCES, HISTORY, INTERNATIONAL RELATIONS)
•	MONTHLY ACCOUNTS RELATING TO EXTERNAL TRADE OF GHANA (04122/01 ECONOMICS)
•	MONTHLY REPORT ON CANADIAN EXTERNAL RELATIONS (01795/01 INTERNATIONAL RELATIONS)
EXTRA	PALL MALL GAZETTE EXTRA (02832/03 POLITICAL SCIENCE)
EXTREME	ANNUAIRE FINANCIER FRANCE EXTREME-ORIENT (00485/01 ECONOMICS)
•	BULLETIN DE L'ECOLE FRANCAISE DE L'EXTREME ORIENT (05555/01)
•	CAHIERS DE L'ECOLE FRANCAISE D'EXTREME-ORIENT (02694/01 GEOGRAPHY)
•	COURRIER D'EXTREME-ORIENT (05974/01)
•	REVUE DE SUD-EST ASIATIQUE ET DE L'EXTREME-ORIENT (03486/03 POLITICAL SCIENCE, SOCIOLOGY)
FABIAN	ANNUAL REPORT OF THE FABIAN COMMONWEALTH BUREAU (02712/01 POLITICAL SCIENCE)
•	FABIAN SOCIETY ANNUAL REPORT (01265/01 POLITICAL SCIENCE)
FABRICKER	ROTTERDAM KAMER VON KOOPHANDEL EN FABRICKER STATISTICK VON HANDEL NIJVERHEID EN VERKEER (02207/01 ECONOMICS)
FACHPRESSE	DOKUMENTATION WIRTSCHAFTLICHER UND TECHNISCHER ARTIKEL DER AUSLANDISCHEN FACHPRESSE (06708/01)
FACHZEITSCHRIFT	SOZIALE SICHERHEIT FACHZEITSCHRIFT FUR DIE SOZIALVERSICHERUNG (02308/01 SOCIOLOGY)
FACOLTA	ANNALI DELLA FACOLTA DI ECONOMIA E COMMERCIO (03114/01 ECONOMICS, SOCIOLOGY)
•	ANNALI DELLA FACOLTA DI ECONOMIA E COMMERCIO DELL'UNIVERSITA DEGLI STUDI DI CAGLIARI (04542/01 ECONOMICS)

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APPENDIX 7 List of all CLOSSS analyses

C01/1	Code Analysis for all titles, all serials and current serials (no percentage calculations)
C01/2	Code Analysis for all titles, all serials and current serials (percentages calculated)
C01/3	As 2 but for updated tape
T02/1	Time Analysis for all titles, and titles published in UK, USA, France and Germany (run twice) (Superceded by T09/1)
C03/1	Code Analysis for all serials current at dates 1970, 1965, 1960, 1955, 1950, 194o, 1930, 1920, 1910, 1900, 1890 and 1880 (no percentage calculations)
C03/2	Code Analysis for serials current and dead at above dates (percentages calculated)
C03/3	Code Analysis for all current serials at above dates (percentages calculated)
C04/1	Code Analysis for all serials with field 17 coded A# to K#
C04/2	Code Analysis for all serials with field 17 coded L# to W#
C04/3	Code Analysis for current serials with field 17 coded A# to K#
C04/4	Code Analysis for current serials with field 17 coded L# to W#
C05/1	Code Analysis for all serials and current serials with field 15 coded 1 or 2
C06/1	Code Analysis for current serials with field 19 coded 0
C07/1	Code Analysis for all serials with field 09 coded A to I
C07/2	Code Analysis for current serials with field 09 coded A to I
C08/1	Code Analysis for all serials with field 11 coded with PNL's 12 groups. (UK, US, FR, GW + GG, BE, IT, NE, SZ, CN, II, AT, BU + CS + GE + EU + PL + RM + UR + YU)
C08/2	Code Analysis for current serials with field 11 coded into PNL's 12 groups
T09/1	Time Analysis for serials with field 11 coded into PNL's groups (All, UK, US, FR, GW + GG, BE, IT, NE, SZ, CN, II, AT, BU + CS + GE + HU + PL + RM + UR + YU). Scans 1-13

Appendix 7 (continued)

C10/1	Code Analysis for all serials with field 11 coded into SAR's groups
C10/2	Code Analysis for current serials with field 11 coded into SAR's groups
T11/1	Time Analysis for serials with field 11 coded into SAR's groups. Scans 14-24
C12/1	Code Analysis for all serials and current serials with field 13 coded into 5 groups (A, B+C+D+E+F+H+N, I+J, P, G+K+L+M+Q)
C13/1	Code Analysis for all serials and current serials with field 13 coded G,I,J,K
M14/1	Analysis of Code Combinations for all serials for fields 14, 16 & 17
M14/2	Analysis of Code Combinations for current serials for fields 14, 16 & 17
T15/1	Time Analysis for serials with field 17 coded into 17 groups, scans 2-18, scan 1 from T09/1
T16/1	Time Analysis for serials with field 13 coded into 7 groups A,B+C+D+E+F+H+N, G, I, J, K and P. Scans 2-8, scan 1 from T09/1
D17/1	Record Dump for i) field 17 coded C‡, MC, S‡-criminology ii) field 14 coded K - review journals iii) field 14 coded J only - news journals iv) field 09 coded F -dinternational organisations v) field 14 coded B, C, E - secondary services vi) field 13 coded B,C,D,E,F,H, N - secondary services
D18/1	Record Dump for i) field 06 not present or coded '-' ii) field 20 present - indexing and abstracting services
C19/1	Code Analysis for all serials and current serials with field 11 coded into SAR's 3 groups
T20/1	Time Analysis for serials with field 11 coded into SAR's 3 groups. Scans 25-27
K21/1	CLOSSS KWOC analysis
K21/1	CLOSSS KWOC analysis (extended stopword list)

Appendix 7 (continued)

C22/1 Code Analysis for all serials and current serials with

i) field 13 coded A and field 11 coded UK
ii) " 13 " A " " 11 " US
iii) " 13 " A " " 11 not coded US or UK
iv) " 13 " A " " 15 coded 1 or 2
v) " 13 " J " " 11 " UK
vi) " 13 " J " " 11 not coded UK

C23/1 Code Analysis for all serials and current serials with

i) field 16 with 1 entry coded ENG
ii) " 16 " 1 " not coded ENG
iii) " 16 " 2 or more entries
iv) " 17 " 2 " " "
v) " 17 " 1 entry

L24/1 Title length analysis for all titles, and for titles with field 17 coded A#, B#, C#, D#, E#, F#, I#, J#, K#, L#, M#, N#, P#, Q#, R#, S#, T#, U# and V#

L24/2 Title length analysis for all current titles, and for current titles with field 17 coded into above groups

L25/1 Title length analysis for all titles and current titles with field 13 coded A, B+C+D+E+F+H+N, G, I, J, K and P.

L26/1 Title length analysis for all titles current at 1970, 1965, 1960, 1955, 1950, 1940, 1930, 1920, 1910, 1900, 1890 and 1880.

FORM & SUBJECT APPENDIX 8

	anthropology	archaeology	architecture	criminology	economics	education	geography	history	law	librarianship	linguistics	management	philosophy	planning	politics	psychology	social policy	social science	sociology	statistics	total subjects	overlap	total
journal	109	35	46	29	791	376	168	107	151	64	243	109	30	121	563	237	177	252	208	46	3715-	463 =	325
report	4	4	1	10	217	32	5	4	10	15	2	12	1	19	81	8	86	25	23		559-	62 =	49
statistics			4	1	139	2	1		1			3		2	11		8	39	15	6	232-	29 =	20
yearbook	1			3	60	18	8	2	8	3		3			37	2	14	19	6	1	184-	18 =	16
monog. ser.	24	3		1	44	5	9	11	3		3	9	2	4	20	8	1	9	3		159-	23 =	1
conf. proc.	1			2	47	6	4	2	5	1	3	8	1	4	42	5	18	3	11	2	166-	27 =	1
secondary serv.	6	5	3	4	33	25	12	4	5	6	10	11		10	22	6	8	66	10	2	248-	29 =	2
others	2	1			20	5	2		14	1	3		1	1	18	1	3	5	3		80-	15 =	
TOTAL	147	48	54	50	1351	469	209	130	197	90	264	155	35	162	794	267	309	385	280	11			
% of total for form																							
journal	3	1	1	1	24	12	5	3	5	2	7	3	1	4	17	7	5	7	6	1	115-	15 =	10
report	1	1		2	44	6	1	1	2	3		2		4	16	2	17	5	5		112-	12 =	10
statistics			2		68	1						1		1	5		4	19	7	3	113-	14 =	10
yearbook	1			2	36	11	5	1	11	2		2			22	1	8	11	4	1	110-	11 =	
monog. ser.	18	2		1	32	4	7	8	2		2	7	1	3	15	6	1	7	2		116-	16 =	10
conf. proc.	1			1	34	4	3	1	4	1	2	6	1	3	30	4	13	2	8	1	119-	19 =	10
secondary serv.	3	2	1	2	15	11	5	2	2	3	5	5		5	10	3	4	30	5	1	113-	13 =	10
others	3	2			31	8	3		22	2	5		2	2	28	2	5	8	5		123-	23 =	10
% of total for subject																							
journal	74	73	85	58	59	80	80	82	77	71	92	70	86	75	71	89	55	60	74	81			
report	3	8	2	20	16	7	2	3	5	17	1	8	3	12	10	3	28	6	8				
statistics			7	2	10				1			2		1	1		3	10	5	11			
yearbook	1			6	4	4	4	2	4	3		2			5	1	5	5	2	2			
monog. ser.	16	6		2	3	1	4	8	2		1	6	6	2	3	3		2	1				
conf. proc.	1			4	3	1	2	2	3	1	1	5	3	2	5	2	6	1	4	4			
sec. serv.	4	10	6	8	2	5	6	3	2	8	4	7		6	5	2	3	15	4	4			
others	1	2			1	1	1		7	1	1		3	1	2		1	1	1				
TOTAL	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100			